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P H Y S I O G N O M Y

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P H Y S I O L O G Y,

AND APPLIED TO VARIOUS

COUNTRIES, PROFESSIONS, AND INDIVIDUALS:

AN APPENDIX ON THE BONES AT HYTHE -- THE SCULLS OF THE ANCIENT
INHABITANTS OF BRITAIN AND ITS INVADERS.

BY ALEXANDER WALKER,

FORMERLY LECTURER ON ANATOMY AND PHYSIOLOGY
AT EDINBURGH.

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ERRATUM.

In page 36, and elsewhere, for Flemming, *read* Fleming.

PRELIMINARY REMARKS.

“THE finger of God,” saith Sir Thomas Brown, “hath left an inscription upon all his works, not graphical or composed of letters, but of their several forms, constitutions, parts and operations, which, aptly joined together, do make one word that doth express their natures.”

Here, an important truth is beautifully and poetically expressed. This, however, may be done more plainly and philosophically, by saying, that the action of all bodies must depend upon their structure — their functions upon their organization, and that therefore the external appearance of or-

ganization correctly indicates function. This is the foundation of physiognomy.

It is necessary here to explain, that the writer's views have nothing to do with craniology. This observation is necessary, because general readers are not always aware, that, while the greatest physiologists have established the general truth, that the nervous system is the organ of the mind, the craniologists have only availed themselves of this to found upon it an erroneous doctrine.

As the author's object was to present to the reader a *system* of physiognomy, and it was therefore necessary for him in some measure to profit by the labours of others, it is right that he should indicate the only points on which he can himself lay any claim to originality. These are as follows:—

The general arrangement of anatomy and physiology;

The application of this to physiology;

Its application to physiognomy;

The assignment of the use of the cerebellum;

The pointing out of accurate criteria and indications of the relative power of the various mental functions;

The explanation of the influence of the relative length and breadth of organs upon their functions ;

The application of preceding principles to the varieties of the human species ;

New view of the causes of these varieties ; .

New views as to the origins of British population ;

The analysis of English, Scottish and Irish character ;*

The analysis of French character ;†

The comparison of Greek and Gothic art ;

The comparison of the modern with the ancient Romans ;‡

The application of the preceding principles to individuals, or basis which they afford for physiognomy in general ;

The refutation of Gall's doctrine ;

The distinction of the parts of the face, as giving locomotive, vital, or mental character ;

* An outline of this was communicated by the writer to Blackwood's Magazine for November, 1829.

† An outline communicated to the same Magazine for September, 1829.

‡ An outline, to the same for September, 1829.

The explanation of the advantages arising from the face displaying volition as well as sensation;

The explanation of the mode in which the face affords physiognomical indications;

The explanation of the cause of the number of the organs of sense;

The explanation of the cause of their being double or single;

The explanation of the cause of their different situations;

The explanation of the cause of their animal or intellectual relations;

The explanation of the peculiar relation of each organ of sense to the brain, as essential to understanding the expressions of each; an effect distinct in character being produced by the action of each of these organs when communicated to the brain;

The reasoning to shew that intellectual ideas, emotions, and passions are the distinct effects of the impressions of touch, vision, and hearing, respectively;

The reasoning to shew that animal emotions and

passions are the effects of the impressions of smell and taste, respectively;

The description of the relation of these organs and functions to each other;

The explanation of the different indications which they consequently afford;

The explanation of the physiognomical expressions of each organ of sense and the parts connected with it.—As nearly the whole of these are new, and as most of them are indicated in the table of contents, it is unnecessary to enumerate them here;

The indication of the correspondence between some parts of the face and of the posterior parts of the head.

It seems necessary, in these preliminary remarks, to say that, while the chief disappointment in physiognomy has arisen from the utter want of principles, some has ensued from extravagant expectations. Physiognomy can indicate only capacities and capabilities, and never or very rarely, individual actions. Probable conclusions as to virtues and vices may, indeed, be drawn; and, where in-

dulgences have become habitual, and have altered external appearance, these may be predicted.

An old physiognomist has recommended the observer to assume the expressions of those he meets, in order to discover their minds. I must say, that I have found even the slightest assumption of such expression an excellent guide ; and I am convinced, that those who add this to a knowledge of the following principles, will find few difficulties in physiognomy.

The first and second Chapters of the work may seem too anatomical for general readers ; but those who carefully peruse them, will find themselves amply repaid by the facility which this will ensure during the subsequent study of the science.

CHAPTER I.

THE WHOLE BODY, THE SUBJECT OF PHYSIognomy.

PHYSIOGNOMISTS have erred in considering the head alone as the subject of their science. That science applies to the whole body. The basis of its first distinctions, is the relative development of the three different systems—locomotive, vital, and mental, of which the body is composed. These, therefore, must be the first subjects of our enquiry.

In viewing the human organs in a general manner, a class of these organs at once obtrudes itself upon our notice, from its consisting of an apparatus of levers, from its performing motion from place to place, or locomotion, and from these motions being of the most obvious kind.—A little more observa-

tion presents to us another class, which is distinguished from the preceding by its consisting of cylindrical tubes, by its transmitting and transmuting liquids, or performing vascular action, and by its motions being barely apparent.—Further investigation discovers a third, which differs essentially from both these, in its consisting of nervous particles, in its transmitting impressions from external objects, or performing nervous action, and in that action being altogether invisible.

Thus, each of these classes of organs is distinguished from another by the structure of its parts, by the purposes which it serves, and by the greater or less obviousness of its motions.

The first consists of levers ; the second, of cylindrical tubes ; and the third, of nervous particles. The first performs motion from place to place, or locomotion ; the second transmits and transmutes liquids, or performs ^xvascular action ; and the third, transmits impressions from external objects, or performs nervous action. The motion of the first is extremely obvious ; that of the second is barely

apparent; and that of the third is altogether invisible.

Not one of them can be confounded with another: for, considering their purposes only, it is evident that, that which performs locomotion, neither transmits liquids, nor sensations; that which transmits liquids, neither performs locomotion, nor is the means of sensibility; and that which is the means of sensibility, neither performs locomotion, nor transmits liquids.

Now, the organs employed in locomotion are the bones, ligaments and muscles; those employed in transmitting liquids are the absorbent, circulating, and secreting vessels; and those employed about sensations are the organs of sense, cerebrum, and cerebellum, with the nerves which connect them.

The first class of organs may, therefore, be termed locomotive, or (from their very obvious action) mechanical; the second, vascular, or (as even vegetables, from their possessing vessels, have life) they may be termed vital; and the third may be named nervous, or (as mind results from them) mental.

The human body, then, consists of organs of three kinds. By the first kind, locomotive or mechanical action is effected; by the second, nutritive or vital action is maintained; and by the third, thinking or mental action is permitted.

Anatomy is, therefore, divided into three parts, namely, that which considers the locomotive or mechanical organs; that which considers the nutritive or vital organs; and that which considers the thinking or mental organs.

Under the locomotive or mechanical organs, are classed, first, the bones, or organs of support; second, the ligaments, or organs of articulation; and third, the muscles, or organs of motion.

Under the nutritive or vital organs, are classed, first, the absorbent vessels, or organs of absorption; second, the blood-vessels, which drive their contents from the absorbed lymph, or organs of circulation; and third, the secreting vessels, which separate various matters from the blood, or organs of secretion.

Under the thinking or mental organs, are classed, first, the organs of sense, where impressions take

place ; second, the cerebrum, or organ of thought, where these excite ideas ; and third, the cerebellum, or organ of volition (placed under the back part of the brain, or immediately over the neck), where acts of the will result from the last. *

* To some it may appear, that the organs and functions of digestion, respiration, and generation, are not involved by this arrangement ; but such a notion can originate only in superficial observation.

Digestion is a compound function easily reducible to some of the simple ones which have been enumerated. It consists of the motion of the stomach and contiguous parts, of the secretion of a liquid from its internal surface, and of that heat, which is the common result of all action, whether locomotive, vital, or mental, and which is better explained by such motion, than by chemical theories. Similarly compound are respiration and generation.

Thus, there is no organ nor function which is not involved by the simple and natural arrangement here sketched.

Compound, however, as the organs of digestion, respiration and generation are, yet, as they form so important a part of the system, it may be asked, " With which of these classes they are most allied ?" The answer is obvious. All of them consist of tubular vessels of various diameter ; and all of them transmit and transmute liquids. Possessing such strong characteristics of the vital system, they are evidently most allied to it. • •

In short, digestion prepares the vital matter, which is taken up by absorption — the first of the simple vital functions ; respiration renovates it in the very middle of its course — between the two portions of the simple function of circulation ; and generation, dependent on secretion — the last of these

We may now more particularly notice the functions of these organs, which are the subject of Physiology.

In the locomotive functions, the bones at once give support, and form levers for motion; the ligaments form articulations, and afford the points of support; and the muscles are the moving powers.

To the first, are owing all the symmetry and ele-
functions, communicates this vital matter, or propagates vitality to a new series of beings. In such arrangement, the digestive organs, therefore, precede, and the generative follow, the simple vital organs; while the respiratory occupy a middle place between the venous and the arterial circulation.

Nothing can be more improper, as the preceding observations shew, than considering any one of these as a distinct class.

More fully, therefore, to enumerate the vital organs, we may say that, under them, are classed, first, the organs of digestion, the external and internal absorbent surfaces, and the vessels which absorb from these surfaces, or the organs of absorption; second, the heart, lungs, and blood vessels, which derive their contents (the blood) from the absorbed lymph, or the organs of circulation; and third, the secreting cavities, glands, &c. which separate various matters from the blood, or the organs of secretion, and of which generation is the sequel.

This Arrangement of Anatomy, and the following one of Physiology, as well as the views on which the former is founded, were first published by the writer in 1806, and afterwards in "Preliminary Lectures," Edinburgh, 1808.

gance of human form ; to the second, its beautiful ^{disjunct} flexibility ; and to the third, all the grace and brilliancy of motion which fancy can inspire, or skill can execute.

In the vital functions, the food, having passed into the mouth, is, after mastication, thrown back by the tongue and contiguous parts into the cavity behind, called fauces and pharynx ; this contracting, presses it into the œsophagus or gullet ; this also contracting, propels it into the stomach, which, after due digestion, similarly contracting, transmits whatever portion of it is sufficiently comminuted to pass through its lower opening, the pylorus, into the intestines ; these, similarly pressing it on all sides, urge forward its most solid part to the anus ; while its liquid portion partly escapes from their pressure into the mouths of the absorbents. The absorbents, continuing a similar contractile motion, transmit it, under the name of chyle, through their general trunk, the thoracic duct, into the great veins contiguous to the heart, whence it flows into the anterior side of that organ. The anterior side of the heart, forcibly

repeating this contraction, propels it, commixed with the dark and venous blood, into the lungs, which perform the office of respiration, and in some measure of sanguification; there, giving off carbonaceous matter, and assuming a vermillion hue, it flows back into the posterior side of the heart. The posterior side of the heart, still similarly contracting, discharges it into the arteries; these maintaining a like contraction, carry it over all the system; and a great portion of it, impregnated with carbon, and of a dark colour, returns through the veins, in order to undergo the same course. Much, however, of its gelatinous and fibrous part is retained in the cells of the vascular parenchyma forming the basis of the whole fabric, and constitutes nutrition; while other portions of it become entangled in the peculiarly formed labyrinths of the glands, and form secretion and excretion. As digestion precedes the first, so generation follows the last of these functions, and not only continues the same species of action, but propagates it widely to new existences, in the manner just described.

In the mental functions, the organs of sense receive external impressions, which excite in them sensations ; the cerebrum, having these transmitted to it, performs the more complicated functions of mental operation, whence result ideas, emotions, and passions ; and the cerebellum, being similarly influenced, performs the function of volition, or causes the acts of the will.

It is not unusual to consider the body as being divided into the head, the trunk and the extremities ; but, in consequence of the hitherto universal neglect of the natural arrangement of the organs and functions into locomotive, vital, and mental, the beauty and interest which may be attached to this division, have equally escaped the notice of anatomists.

It is a curious fact, and strongly confirmative of the preceding arrangements, that one of these parts — the extremities, consists almost entirely of locomotive organs, namely, of bones, ligaments, and muscles ; that another — the trunk, consists of all the greater vital organs, namely, absorbents, blood-vessels, and glands ; and that the third — the head,

contains all the mental organs, namely, the organs of sense, cerebrum, and cerebellum.*

It is a fact not less curious nor less confirmative of the preceding arrangements, that, of these parts, those which consist chiefly of locomotive or mechanical organs — organs which, as to mere structure, and considered apart from the influence of the nervous system over them, are common to us with the lowest class of beings, namely minerals,† are placed in the lowest situation, namely, the extremities; that which consists chiefly of vital organs — organs common to us with a higher class of beings, namely vegetables, ‡ is placed in a higher situation, namely, the trunk; and that

* In perfect consistency with the assertion, that, though the organs of digestion, respiration, and generation, were really compound, still they were chiefly vital, and properly belong to that class, it is not less remarkable, that in this division of the body, they are found to occupy that part — the trunk, in which the chief simple vital organs are contained. This also shows the impropriety of reckoning any of these a separate system from the vital.

† The bones resemble these, in containing the greatest quantity of mineral matter.

‡ It is the possession of vessels which constitutes the vitality of vegetables.

which consists chiefly of mental organs — organs peculiar to the highest class of beings, namely animals,* is placed in the highest situation, namely, the head.

It is not less remarkable, that this analogy is supported even in its minutest details; for, to choose the vital organs contained in the trunk as an illustration, it is a fact that those of absorption and secretion, which are most common to us with plants — a lower class of beings, have a lower situation — in the cavity of the abdomen; while those of circulation, which are very imperfect in plants,† and more peculiar to animals — a higher class of beings, hold a higher situation — in the cavity of the thorax.

It is, moreover, worthy of remark, and still illustrative of the preceding arrangements, that, in each of these situations, the bones differ both in position and in form. In the extremities, they are situate internally to the soft parts, and are gene-

* In animals alone, is nervous matter discoverable.

† Plants have no real circulation, nor passage of their nutritive liquid through the same point.

rally of cylindrical form; in the trunk, they begin to assume a more external situation and a flatter form, because they protect vital and more important parts, which they do not, however, altogether cover; and, in the head, they obtain the most external situation and the flattest form, especially in its highest part, because they protect mental and most important organs, which, in some parts, they completely invest.

The loss of such general views is the consequence of arbitrary methods.

To Physiognomy, then, these anatomical and physiological views will be found to be immediately applicable.

In some men, the bones are large and the skeleton well proportioned, the joints strongly and firmly knit, and the muscles swelling and powerful. The limbs, in this case, bear a large proportion to the body; and every motion is either determined or springy. This constitutes beauty of the locomotive system. It is exemplified in the Hercules or the Gladiator, and sometimes in the men of our Scottish border, or Highlands.

In other men, the body is large, and the limbs proportionally short and slender; and even progression is effected rather by the roll of the trunk which lifts with it the limbs, than by any power of the limbs themselves. This constitutes, in men, an excess of the vital system. It is exemplified in the Saxon population of England.

In others, still, there is a defect of the preceding characteristics; but the head is large, the countenance expressive, and the language and manners indicative of thought. This constitutes beauty of the mental system. It is best exemplified in the remains of Grecian sculpture—in the high and not too wide foreheads of Homer, Epicurus, Hippocrates, &c., and in the comparatively few living men—few in all countries, who lead and advance civilization.

This needs no other illustration here, as the author has devoted a separate work to the Analysis and Classification of Beauty.—The above sufficiently shows, that the whole body is the subject of physiognomy.

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CHAPTER II.

THE HEAD IN PARTICULAR, AS THE SUBJECT
OF PHYSIOGNOMY.*

THE superiority of man over other animals in regard to mind, led physiologists, at an early period,

* Previous to the following observations referring to the cranium or scull, persons unacquainted with anatomy, and unaccustomed to its terms, may peruse this note.

The cranium or scull consists of an upper portion, named calvarium, and a lower, named the face.—The calvarium forms two internal cavities, called encephalic, of which the largest is named cerebral, from its containing the cerebrum, and the smallest (which in man is under the posterior part of the cerebral cavity, just as the face is under its anterior part) is named cerebellic, from its containing the cerebellum.—The face also presents to us various important parts: the os frontis or bone of the forehead; the ossa parietalia or lateral bones of the head; the os occipitis or posterior and inferior bone of it; the orbits which contain the eyes; the superciliary ridges or upper margins of these orbits; the glabella or

to seek for some corresponding difference in the brain.

They, in the first instance, naturally compared the proportion, which the brain bears to the body ; and the result of this, in the more common animals, was so satisfactory, that they adopted it as a rule, that man has the largest brain in proportion to his body.

Later physiologists, however, found that, in some birds, the proportion of the brain to the body exceeds that of man ; and that several mammalia equal man in this respect.

space between them ; the frontal sinuses or cavities within the bone, between and above the orbits ; the prominences of the cheeks, called ossa malarum ; the cavities behind them, called temporal fossæ ; the bony arches, called zygoma, which extend backward over these fossæ toward the ear ; the meatus auditorius or passage from the outer to the inner ear ; the ossa maxillaria or jaw bones ; the malar or maxillary fossæ, which are below the prominences of the cheeks ; the alveolar processes, which are covered by the gums, and contain the teeth ; the ossa nasi or bones of the nose ; the nares or internal cavities of the nose ; the choana or posterior passage between the nose and mouth ; the palate or roof of the mouth ; the angles of the inferior maxillary or lower jaw bone ; the foramen magnum or great occipital hole in the basis of the scull, &c.

No positive conclusion assuredly can be drawn from a comparison of the body, of which the bulk is rendered variable by many causes, with the brain, which is not subject to the influence of such causes.

Even, however, if this objection were obviated, no useful conclusion could be derived from a method in which the cerebrum and cerebellum are undistinguishingly involved.

As later observations had overturned the previous conclusion, Sömmerring adopted another point of comparison, viz. the proportion, which the mass of the brain bears to the nerves arising from it.

Supposing the brain to be divided into two parts, — the first including that which is immediately connected with the sensorial extremities of the nerves, — the second, the rest of the brain, — Sömmerring asserts, that, in proportion as any animal possesses a larger share of the latter, and more noble part — that is (as he conceives) in proportion as the organ of reflexion exceeds that of the external senses, are the powers of the mind more developed and vigorous. In this point of view, man is superior.

All the simiæ, says Sömmerring, are placed far behind man in this respect. Although the brain, in some instances, particularly among the smaller kinds, which have prehensile tails, is larger in proportion to their body than that of the human subject,—yet a very large share of that brain is required for the immense nerves, which supply their organs of sense and mastication. If that portion be removed, a small quantity will remain.

From his researches on animals in general, Sömmerring concludes, that the quantity of brain over and above that which is necessary for mere animal existence—that part (as he conceives) which is devoted to the faculties of the mind, bears a direct ratio to the docility of the animal and to its rank in an intellectual scale.

The largest brain which Sömmerring found in a horse, weighed 1 lb. 4oz. and the smallest in an adult man, 2lb. $5\frac{1}{2}$ oz. Yet the nerves arising from the former were at least ten times larger than those of the latter.

The proportion of the brain to the medulla oblongata, a distinct portion of its base, was esti-

mated by the measure of their diameters by Sömmering and Ebel, who endeavoured to shew, that this proportion is more in favour of the brain in man, than in other animals, and that it is a good criterion of the degree of intelligence an animal enjoys, because it shows the pre-eminence which the organ of reflexion preserves over those of the external senses. There are, however, some exceptions to this rule; and that which the dolphin affords, is very remarkable.

In man, the breadth of the medulla oblongata, behind the pons varolii is to that of the brain as 1 : 7.—In the dolphin, as 1 : 13.

All reasonings, however, such as these of Sömmering, which at once involve the cerebrum and cerebellum — the greater and less brain, must be false, for this cause, that, while, in two different animals, the relative magnitudes of the whole brain and of the face are the same, the relative magnitudes of the cerebral and cerebellic portions do often differ; and, as it will readily be granted that they perform different functions, this must occasion the greatest possible difference in the intellectual

powers of animals. Such a method must, therefore, lead to deceitful conclusions.*

As to the comparison of the cerebrum with the cerebellum, their respective functions not being understood by anatomists, they cannot tell what it indicates. As a monkey (*Saimiri* — 1 : 14) stands at one, and a mouse (1 : 2) at the other extremity of this scale, they will hardly insist that it points out relative energy of mind, for in that case, man must be inferior to either the one or the other of these animals.

Finding the observation of Sömmerring inaccurate, I was naturally induced to seek cautiously for a better criterion.

In order to explain the criteria which appear to me preferable, because they arise out of the nature and the parts of the organ, I must observe, that the degrees of the sensitive, intellectual, and voluntary functions may be very variously combined, and that it seems first necessary to determine what are their organs.

That the organs of sense are the organs of sen-

* The situations of these organs are indicated in Plate I .

sation, is questioned by no one; that the brain is the organ of intellect, is also granted; and in this view, it only remains to be determined, what is the organ of volition.

I shall endeavour to do this in the words of a communication made by me to Thomson's Annals of Philosophy for July 1815, in reply to some observations of Dr. Leach and Dr. Cross.

Willis thought the cerebellum was the organ of involuntary power. "The office of the cerebel," says he, "seems to be for the animal spirits to supply some nerves, by which involuntary actions, which are made after a constant manner unknown to us, or whether we will or no, are performed."*

Willis was right in assigning to the cerebellum the involuntary motions; but he erred in excluding the voluntary ones; for the cerebellum is the source of all motion, voluntary and involuntary, as I shall shew in the sequel: while it is the source of every impulse on the muscular system, voluntary is always changed into involuntary power only by ganglia on the cerebellic nerves.

* On the Brain, chap. xv.

Haller says “*Convulsiones artuum constanter vidimus in animalibus supervenisse, quorum cerebellum vulneraveramus. — Et de convolutionibus dictum est, quæ sunt muscularum voluntariorum. Ex cerebello etiam, si ullus, quintus sensui destinatus et voluntario motui nervus prodet. Quare collectis omnibus, videtur cerebellum et a cerebro hactenus parum differre, et graves in utrovis læsiones mortem inferre, leviores in utroque tolerari. Dejnde cerebrum ad vitalia organa et sentientem vim et moventem mittere, et ad partes mentis arbitrio subjectas cerebellum.*” Here, then, it appears that Haller, after proceeding upon an ‘it is said’ as to the convulsion of the voluntary muscles,— observing that the fifth pair coming from the cerebellum is, however, destined both to sense and motion,—and thinking that, upon the whole, the cerebellum in so far differs little from the cerebrum,— at last concludes that the cerebrum seems to send both feeling and moving power to the vital organs, while the cerebellum sends both feeling and moving power to the parts which are subject to the will.

Now, from this, I differ by asserting, that the

cerebrum sends neither sensation nor motion to any part, but merely receives sensation from the organs of sense ; while the cerebellum has not only nothing to do with sensation, as Haller erroneously asserts, but sends motion both to the voluntary and to the involuntary parts, — or, in other words, both to the mechanical or locomotive, and to the vital or nutritive system, which Haller inaccurately excludes from its influence. The motions of the vital, are, however, not less important than those of the locomotive system.

The term volition, however, may be still applied to the function of this organ, whether voluntary or involuntary action be its result, because the impulse of the cerebellum on which they both depend, is one and the same, and the involuntary power is a modification of that impulse or of its effects, produced only by ganglia on certain fibrils of the cerebellic nerves. This extended meaning of the word volition is perfectly analogous to that of the term sensation ; for though sensation does not exist separately, except in those animals which have no sensorium commune, — though, in man, it is inse-

parable from perception, yet still is the simple term sensation employed.

I shall now state some of my reasons for asserting, that the organs of sense being those of sensation, and the cerebrum that of mental operation, the cerebellum is the organ of volition, or rather of all the motions of animals, voluntary and involuntary.

1. There are three distinct intellectual organs or classes of intellectual organs, namely, the organs of sense, the cerebrum, and the cerebellum.—That the cerebellum, though separated from the cerebrum only by membranes in man, is not on that account less distinct from it than are the organs of sense separated by bony plates, is rendered evident by the consideration, that membranes form, in the one case, as effectual a separation as bony plates do in the other; that many animals * have a bony tentorium between the cerebrum and the cerebellum, as they have bony plates between the cerebrum and face; and that others (birds) have mem-

* Viz. most species of the cat and bear kind, the martin (*mustela martes*), the coaita (*cercopithecus paniscus*), and others.

branes between the cerebrum and face, as they have a membranous tentorium between the cerebrum and cerebellum.

2. There are three distinct intellectual [mental] functions or classes of intellectual [mental] functions, namely, sensation, mental operation, and volition. 8998

3. Of these organs, those of the senses are the first, the cerebrum intermediate, and the cerebellum the last.—For although the face, containing the organs of sense, and the cerebellum, are, in different animals, very differently placed with regard to the cerebrum, yet there is a peculiar relation between the situation of one of these and that of the other with regard to it. In other words, although the face is sometimes in one situation and sometimes in another with relation to the cerebrum, yet, to each given variation of its situation with regard to that body, there is a corresponding and uniformly accompanying variation in the situation of the cerebellum. Thus as, in man, the face is placed below the anterior part of the cerebrum, so is the cerebellum placed below its pos-

terior part; and precisely as, in the inferior animals, the face advances, precisely so does the cerebellum recede, till, in those animals in which the face is placed exactly before the cerebrum, the cerebellum is placed exactly behind it.

4. Of the functions, sensation is the first, mental operation intermediate, and volition the last.— That sensation precedes and excites, if it do not generate, mental operation, few will deny; that mental operation, however rapid or evanescent, precedes and excites volition, or that the motive to an action must precede the action, none will refuse; and that, of any one series of mental action, volition is the last stage, all must admit.

5. As then, the cerebellum is the last of the intellectual organs, and volition the last of the intellectual functions, and as, at the same time, there is no organ without function, nor function without organ, it follows, that the cerebellum must be the organ of volition.

* The cerebellic cavity, moreover, seems uniformly to commence on the inside of the base of the cranium exactly opposite to the place where the face or the lower jaw terminates on the outside.

6. In perfect conformity with this truth, the inferior animals, however defective in intellect, possess motion ; and, in almost all of them which have any visible nervous system, a cerebellum, the organ of that motion, exists. — This leads me to an observation which seems to me to possess considerable interest and beauty. As we descend among animals, one of the three portions of the nervous system and one of its three general functions gradually disappear. Now it is not the first and the last portions of the nervous system — it is not the organs of sense and the cerebellum, neither is it their respective functions, sensation and volition, which are thus lost. It is the cerebrum and mental operation which are. This organ is, among men, most conspicuous in the Caucasian race ; and we accordingly find that that race alone has cultivated the sciences. It is less even in the Mongol and Ethiop, who have ever disregarded them. It gradually disappears and ultimately evanishes, as we descend among quadrupeds, birds, reptiles, fishes, &c., and with it gradually disappear and ultimately vanish the powers of thought. But

organs of sense and a cerebellum, sensation and volition, yet remain to characterize myriads of animals below these.

7. This truth receives new confirmation when we observe, that the degrees of voluntary power always bear a close analogy to the various magnitudes of the cerebellum. In fishes, for instance, which possess amazing locomotive power, the cerebellum is often larger than the cerebrum; and they sometimes possess an additional tubercle, which seems to Cuvier to form a second cerebellum!

This is a general principle, [for] if we compare the cerebella of birds with those of quadrupeds, we find the former larger in proportion to the brain, consistently with their more intense, frequent, and rapid voluntary motion; and if we compare the cerebella of fishes with those of birds, we find the former, in both these respects, excel the latter. But if we enter into more particular examinations — if we compare those parts in the genera and species of animals, as Cuvier has done, our observations must be more particular than his — we must attend not only to the

general magnitude of the organs, but to their particular form; for (I now repeat an important fact which I, prior I believe to any other person, announced some years ago) — “on the length of the cerebral organs depends the intensity of their function, and on the breadth of these organs, the permanence of their function.”

As liquids pass with greater velocity through the narrow portion of a tube than through its wider parts, precisely so must all nervous action pass between the parieties of the organs — the tubes of the neurilema, whether that action be performed by fluids, by liquids, or by globules as proved by Prochaska and others. That the nervous matter is thus laterally confined by the neurilema, is proved by the circumstance of the ends of nerves expanding when cut; and they are, therefore, in so far subject to similar laws with liquids contained in tubes.*

* It is perhaps also for the same reason, that in a galvanic battery, the intensity of its action seems to correspond with the number of the plates (for the igniting power is as the number), and the permanence of its action with the magnitude of the plates. Accordingly, M. de Luc observes, that the num-

This curious and important fact may be illustrated from the classes of animals; for the laterally compressed and high cerebellum of birds corresponds admirably with the intensity of their voluntary powers, and the depressed and flat cerebellum of the turtle, frog, salamander—in short, of all the slow but long moving reptiles, equally corresponds with the permanence of their voluntary power.

It is, then, from Cuvier's not distinguishing between the height and the breadth of the organs, and their corresponding intensity or permanence of function, that his comparison of man and the bull, and his scale in general, is of diminished value, and quite inapplicable to the present question.*

While some physiologists have borrowed the

ber of the plates is analogous to the length of a pump for raising water; and the size of the plates is analogous to the magnitude of the bore of the pump.

* There are, I may now add, other sources of error in such more minute or limited comparisons, arising from this, that, both in the cerebrum and the cerebellum, certain parts, existing in very different proportion in different animals, appear to be subservient to the sensations and motions of the vital system.

preceding doctrine without acknowledgement, Dr. Flent~~ming~~, in his Philosophy of Natural History, has subjected it to liberal criticism.

"According to Mr. Walker," he says, "the cerebrum is the organ of sensation [no, not of sensation, but of united sensations or perception], or the centre to which all the impressions are communicated [certainly, and where they form perception], and in which deliberation is practised, while the cerebellum is the organ of volition. The nerves which terminate in the cerebrum, and the anterior columns of the spinal marrow, convey impressions to the mind; and the nerves which arise from the cerebellum and the posterior columns of the spinal marrow, execute the purposes of volition."

"As we descend towards fishes, the cerebrum diminishes so much in size, that its total absence may be inferred in the lower classes. Observation confirms the supposition. It can scarcely be detected in the mollusca, and it is wanting in the annulosa. Now, if these opinions with regard to the uses of the cerebrum and its different parts were correct, we ought to find in the animals which

are destitute of the organ a total want of the functions which it is destined to perform ; for we can scarcely suppose, that any of the other organs of the body can supply its place. But still we find, among insects, for example, not merely sensation and volition, but instincts, propensities, and deliberation which, when they occur in the higher classes, are considered worthy of having peculiar organs set apart for their production."

Now, here, Dr. Fleming has failed to observe that, to animals wanting a cerebrum, I do not deny sensation, for that is the function of the organs of sense ! and as to volition, they ought assuredly to possess it, since they possess its organ, as in the next paragraph Dr. Fleming allows !

" But the cerebellum still exists in these mollusca and annulosa ; and may, therefore, be considered as exercising the functions of sensation and volition. [It is not necessary it should exercise the former!] Let us descend, therefore, to the inhabitants of the Corals or to the Hydræ : in these, neither brain nor nerves can be perceived. Yet they evidently possess both sensation and voli-

tion, and as evidently want a cerebrum and cerebellum."

The same oversight is committed here as to sensation! the surface of these animals is evidently their organ of touch. That, however, which in them Dr. Flem~~X~~ing calls volition, is evidently of the most imperfect kind, if it all deserve the name: without either central portion or nervous connexion, it is certainly, like their *sensation*, confined to the mere *particles* composing them: as their *sensation* cannot become *perception*, so neither should such *motion* be denominated *volition*. They have accordingly little or no locomotive power! To palpable volition, inducing palpable locomotion, a cerebellum appears to be indispensable.

The preceding doctrine, therefore, conforms to Cuvier's observation, that "on comparing together all the nervous systems, we find only one common part which is a single tubercle, situated at the anterior extremity of the system, and always producing two lateral and transverse fasciculi or crura which unite it to the rest of the system.—This

part appears always to correspond to that named cerebellum in man.

Man, it must be now observed, has the greatest cerebrum, compared with his cerebellum ; and he has likewise, most intellect, though not most of locomotion.

The proportion of the brain, therefore, to the medulla oblongata, or to the rest of the nervous system, is not, as asserted by Sömmerring, an exact criterion of the degree of intelligence an animal enjoys, because it is not, as he supposed, the index of the pre-eminence, which the organ of reflection preserves over those of the external senses, but the index of the superiority possessed at once by reflection and volition ; and, as it indicates not the degrees in which these are combined, it serves only to mislead. — The comparison also between the cerebrum and cerebellum shows merely the proportion of intelligence to locomotion — a circumstance which anatomists failed to observe, from their not understanding the use of the last mentioned organ. Hence, arise the exceptions which,

as already shewn, subvert the rules afforded by both these modes of comparison.

Thus, then, are determined the seats of the three great intellectual functions ; and we know that their energy in perfect health must precisely correspond with the developement of their organs. Now, that developement may vary as to each of them ; and hence must arise not one but three criteria of the intellectual faculties.

The criterion, then, first of intelligence, is afforded by the proportionally greater magnitude of the cerebrum compared to the face and cerebellum ; the criterion of sense or sensation is afforded by the proportionally greater magnitude of the face, or more properly, of the organs of sense compared to the cerebrum and cerebellum ; and the criterion of volition or of locomotive power is afforded by the proportionally greater magnitude of the cerebellum compared to the organs of sense and the cerebrum.

From every observation which I have been able to make, these criteria appear to be true. Nor is it

possible that any criterion can be correct which does not thus involve all the intellectual organs, and consider each with relation to its particular function.

Even those criteria, however, which I have proposed, though nearly perfect, are not absolutely so, because, as already said, the brain involves parts on which, not intellect, but vitality depends.*

The next principle, of great importance in physiognomy, which I have to establish, has been already incidentally mentioned in the Paper quoted from Thomson's Annals of Philosophy — namely, that on the length of the cerebral organs depends the intensity of their function, and on the breadth of these organs the permanence of their function. This principle, however, was first announced elsewhere in somewhat different terms.

In a treatise on the Influence of Climate by Dr. Pitta, published at Edinburgh in 1812, he observes,

* A comparison of it with the medulla oblongata, as proposed by Sömmerring and Ebel, does not correct this error.

that “wherever the intellectual organs are elevated, there their functions are brilliant or intense; wherever they are wide, there they are stable and permanent.”— And this doctrine he acknowledges to have derived from the present writer.*

About two years afterwards, previous to replying to Dr. Leach, I mentioned the same principle to Dr. Spurzheim, in the terms of that reply; and I have observed it repeated in one or more of his works, with some little variation, and without acknowledgement. Happily, Dr. Pitta’s acknowledgement in 1812, establishes my priority.

It may not perhaps be amiss, that I should illustrate this principle to the reader, as I well remember doing to that gentleman.

My first illustration was derived from the well known circumstance, that, in galvanism, a long battery, consisting of many small plates, acts with greater rapidity and intensity (the igniting power being as the number) than a broad battery, consisting of a few large plates, even though these should present the same extent of surface; while

* See Advertisement prefixed to his work.

on the other hand, the broad battery retains its power after the long battery is entirely exhausted.—With this illustration, as an analogy apparently, the Doctor was struck ; but it did not suggest to him the cause.

My second illustration was derived from supposing a pipe transmitting water to be, in one part of its extent, of 12 inches diameter, and, in the remainder, of one inch diameter ; in which case, it is evident, the water must pass about 12 times quicker through the relatively long and narrow than through the relatively broad and short part.—This illustration was satisfactory. No additional illustration, indeed, seems requisite to the explanation of this principle.

I might have added, that, even in inanimate objects, breadth gives the appearance of stability and permanence, and, in the same objects, length, or—where this is employed in a curve which is convex upward—height, gives the appearance of lightness and elegance.

As, then, liquids pass, as already observed, with greater velocity through the narrow portion of a

tube than through its wider parts, precisely so must all nervous action pass between the parieties of the organs —the tubes of the neurilema, whether that action be performed by fluids, by liquids, or by globules as shown by Prochaska and others. And, as also observed already, that the nervous matter is thus laterally confined by the neurilema, is proved by the circumstance of the ends of nerves expanding when cut; and they are, therefore, in so far subject to similar laws with liquids contained in tubes.

I cannot, moreover, better illustrate this principle from the classes of animals, than as already done, in observing, that the laterally compressed and *high* cerebellum of birds corresponds admirably with the *intensity* of their voluntary powers, and the depressed and *flat* cerebellum of the turtle, frog, salamander —in short, of all the slow but long moving reptiles, equally corresponds with the *permanence* of their voluntary power.

From the mechanical and chemical illustrations which have now been given of this principle, it will readily appear, that it results from the funda-

mental nature of things, and is of universal applicability. Hence, in comparative anatomy, the comparatively long and slender muscles of the carnivorous animals, which move by rapid springs; and the comparatively short and broad muscles of the herbivorous animals, which move by slow steps.

[See Plate I.]

CHAPTER III.

APPLICATION OF THESE PRINCIPLES TO ANIMALS IN GENERAL.

HERE, an observation already made in relation to the cerebellum is peculiarly applicable.

As we descend among animals, one of the three portions of the nervous system and one of its three general functions gradually disappear. Now, it is not the first or the last portion of the nervous system — it is not the organs of sense or the cerebellum, neither is it their respective functions, sensation and volition, which are thus lost. It is the cerebrum and mental operation which are.

This organ is, even among men, most conspicuous in the Caucasian race; and we accordingly find that that race alone has cultivated the sciences.

It is less even in the Mongol and Ethiop who have ever disregarded them. It gradually disappears and ultimately evanishes as we descend among quadrupeds, birds, reptiles, fishes, &c., and with it gradually disappear and ultimately vanish the powers of thought. But organs of sense and a cerebellum, sensation and volition, yet remain, to characterize myriads of animals below these.

Having stated this fact, the reader will be able to appreciate the doctrine of Camper, which, though imperfect, is still of great value. *

* As of minor importance, I throw into a note a brief account of the plan of Daubenton, which is founded on the structure of the head and on the relation which it bears to the trunk.

The great hole in the base of the scull has a different situation in man from that which it has in animals; and this situation again differs in the various species. These differences arise chiefly from the form of the head and the ordinary attitude of the body.

As to the form of the head,—in proportion as the brain increases, so does the posterior part of the scull, and the great hole is thereby further removed from the back of the head towards the middle of its base, where it obtains a more horizontal direction.

As to the attitude of the body,—the head and neck of man being directed vertically, the former is placed in a state of

The plan of Camper is so general as to involve all the superior orders of animals as well as man; and, in that extent, we shall examine it.

equilibrium on the spine, in order to maintain it the more firmly on its point of support, and to facilitate its motions.

Thus the great hole, by the edges of which the head is connected to the spine, is in man placed nearly in the centre of the base of the scull, and is very little more distant from the front of the jaws than from the posterior extremity of the back of the head.

This position of the opening, which places the head in a state of equilibrium upon the neck, and, in the natural erect posture, brings the face forward, would, if man went on four feet, prevent him from elevating his head sufficiently to see before him, because the motion of the head would be stopped by the projection of the occiput meeting the vertebrae or bones forming the spine of the neck.

In most animals, the jaws are considerably elongated; the great hole is placed at the back of the head; and the occiput forms no projection beyond this opening, the level of which is in a vertical line, or at most very slightly inclined. Hence, the head is connected to the neck by its back part, instead of the middle of its basis, as in man; and, instead of being in equilibrium, it hangs to the front of the neck.

This structure, combined with a greater length of neck, bestows on quadrupeds the power of using their jaws for seizing what is before them; of elevating them, to reach what may be above the head, although the body is placed horizontally; and of touching the ground with the mouth, by depressing the head and neck to the level of the feet. The latter motion could not be performed by man, even if he were in the atti-

The cranium, then, being placed laterally, two imaginary lines are drawn on its surface to intersect each other at a particular point.

tude of a quadruped, for if he lowered the head to the ground, he would touch it only with the forehead or crown.

In several animals, there is some distance between the great hole of the scull and the posterior extremity of the head, though this interval is never so considerable as in man ; and, in proportion as it is increased, does the direction of the hole approach more to the horizontal one.

Animals of the monkey kind approach more nearly than others to man, in the position and direction of this hole. In the orang-outang, however, it is twice as far from the jaws as from the back of the head, and it is considerably inclined downward, so that a line drawn in its level passes below the lower jaw; instead of going, as in man, just under the orbit.

The difference, then, in the direction of the hole, may be determined by noting the angle formed by the union of a line drawn according to the direction of the opening, with another line passing from the posterior edge of the great hole to the inferior margin of the orbit: — This constitutes the method of Daubenton.

This angle is of 3° in man, and 37° in the orang-outang. — The length of the jaws in this animal must exceed that of the human subject in the same proportion: the lower jaw is one fourth of the length of the trunk and head, taken from the crown to the lower part of the body; while in man it is only one seventh.

The occipital angle is of 47° in the lemur; it is still greater in the dog; and in the horse it is 90° or a right angle, the position of the opening being completely vertical.

The first line proceeds horizontally through the external aperture of the ear or meatus auditorius externus, and the floor of the nostrils.

The other, or the proper facial line, is continued from the most prominent portion of the forehead, above the nose, to the front of the lower, or alveolar margin of the upper jaw bone. [See Plates II. and III.]

From the angle formed at the junction of these two lines, this anatomist conceived, that we might



In further illustration of this method, it may be observed that the great hole which, in human sculls, is found in the base, proceeds backward as we descend among animals, till, in serpents and fishes, we find it at that part of the head which is opposite to the mouth. In short, it recedes more and more backward to one extremity of the head, as a line following the direction of the vertebral column and continued through the great hole till it fall on some bone of the calvarium, comes more and more forward toward the other.

It is evident, I may now observe, that this method is less applicable to the living head than to the scull, and that it is, therefore, of little practical value.

The still older plan of Albert Durer, who used a frontal, nasal, and maxillary line, is still less worthy of notice than that of Daubenton, which has thus been sketched, and much less so than that of Camper.



CAMPER'S FACIAL LINE,
APPLIED TO MAN.

estimate the differences of the cranium in animals, as well as in the various races of mankind.

A very striking difference between man and all other animals really does consist in the relative proportions of the calvarium or upper part of the cranium, and the face; and these are often indicated by the direction of the facial line.

The two organs which occupy most of the face, are those of smelling and tasting; and in proportion as those parts are more developed, the size of the face is increased in proportion to that of the calvarium. On the contrary, when the brain is large, the size of the calvarium is increased in proportion to that of the face.

A large calvarium and small face indicate, therefore, a large brain with inconsiderable organs of smelling, tasting, masticating, &c.: while a small calvarium and large face show that these proportions are reversed.

Now, the nature and character of each animal must depend in a great measure on the relative energy of its different functions: it is, in fact, regulated by its most powerful sensations. We meet

with examples of this daily in the human species ; but the differences, which can be observed, between one man and another, in this respect, must be much less than those which occur between animals of a different species.

The brain, then, is the common centre of the nervous system : all our sensations are conveyed to this part, which therefore is a sensorium commune, and the organ by which the mind combines and compares these perceptions, and draws inferences from them — by which, in short, it reflects and thinks.

We shall accordingly find, that animals partake in a greater degree of this faculty, generally speaking, in proportion as the mass of medullary substance, forming their brain, exceeds that which constitutes the rest of the nervous system.

Since, then, the relative proportions of the calvarium and face indicate also those of the brain, and the two principal external organs — those organs under the influence of which animals are most completely placed, it is evident that they must point out to us, in a great measure, the ge-

neral character of animals, and the degree of instinct, as it is termed, and docility which they possess.

Man combines by far the largest calvarium with the smallest face; and animals encrease in stupidity and ferocity, in proportion as they deviate from these relations.

One of the most simple methods, then, (though sometimes insufficient) of expressing the relative proportions of these parts, is the facial line already described. In man only, is the face placed perpendicularly under the front of the calvarium; so that the facial line is, in him, perpendicular. Hence, the upper and inner angle formed between this line and the horizontal one, which passes through the nose and meatus auditorius, is, in him, most open, or approaches most nearly to a right angle. [See Plate II.]

The face of animals is placed in front of the calvarium, instead of under it; and that cavity is so diminished in size, that its anterior expanded portion or forehead is soon lost, as we recede from man. Hence, the facial line is oblique, and the

facial or upper and inner angle is acute; it becomes more and more so as we descend in the scale from man; and in several birds, and in most reptiles and fishes, it is nearly or completely lost, as the calvarium and face approach a level, or form parts of one horizontal plane. [See Plate III.]

The idea of stupidity is associated, even by the vulgar, with the elongation of the snout, which necessarily lowers the facial line, or renders it more oblique: hence, the crane and snipe have become proverbial.

On the contrary, when the facial line is elevated by any cause, which does not increase the capacity of the calvarium, as it is in the elephant and owl, by the cells which separate the two tables or bony layers of the scull, the animal acquires a particular air of intelligence, and gains the credit of qualities which it does not in reality possess.

The invaluable remains of Grecian art shew, that the ancients were well acquainted with these circumstances: they were aware that an elevated facial line formed one of the grand characters of beauty, and indicated a noble and generous nature.

Hence, they extended the upper and inner or facial angle to 100 degrees in the representation of their gods and heroes, and they carried it to 90° or a right angle even in the heads of men on whom they wished to bestow an august character. [See Plate II.]

The facial line of the European forms an angle of 80°; and that of the Negro, one of 70° [Plate II.]

Infants have the face shorter, because the posterior teeth are not developed. Hence, their facial line is more straight; and this is one of the causes which render the infant countenance agreeable.

The boundaries of the facial angle, in man, are, therefore, 70° and 80°. A smaller angle than the former constitutes an approach to the monkey. Yet it may be extended beyond the latter, as the Greeks have done in their representations of heroes and of gods, rendering that of the former sometimes 90°, and that of the latter 100°. Here, however, 100° seems to be the ne plus ultra; beyond which the proportions of the head would appear deformed: that angle, according to Camper,

constitutes the most beautiful countenance, and hence he supposes the Greeks adopted it.

They also observed, that the relative size of the head, and consequently proportional volume of brain, are not considerable in tall and very muscular subjects. This is easily verified by the examination of antique statues: all those which represent persons celebrated in fabulous history for prodigious power, have a head of small dimensions, when compared with the whole mass of the body: in the statues of Hercules, it is hardly equal to the top of the shoulder.

The objections which may be urged against this method of Camper are numerous.

To his facial line, it may be objected.

1. That large frontal sinuses, as in the elephant and owl, often prevent its nearly coinciding with the cerebral cavity, and indicating the magnitude of the brain, the degree of the animal's intelligence, and its place in any classification.

2. In the morse and the greater number of the rodentia, the nose occupies so large a space, that the cranium is inclined backward, and has none

of its sides free anteriorly, so that it is difficult to know where to apply the facial line.

3. The cetacea have a calvarium elevated in a pyramidal form, above a face greatly prolonged, but flattened in the horizontal direction; so that the inclination of their facial line is greater than it ought to be, in order to indicate the real magnitude of their face.

4. When this line is applied to birds, it is obvious that, in those which have the upper mandible very moveable, it will be more or less inclined, according to the state of that mandible; the facial angle will be least when the mandible is raised in opening the mouth; but the capacity of the brain and the degree of intelligence will surely not be less when the mouth is open than when shut.

To his horizontal line, it may be objected.

1. That the want of the meatus auditorius externus in young animals, and its varying directions in different ones, would cause this line to pass from parts of the head which have no correspondence in situation.

2. That the point also, to which this line is

drawn, varies greatly as to position. In man and quadrupeds, it is found near the maxillary curve. In birds, it is sometimes at one extremity of the maxilla, sometimes at the other, and sometimes in the middle. In cetaceous animals, the spiracula or breathing holes run obliquely, from the base towards the corona, and terminate in the face near the glabellar part of the cranium. The angle formed by the facial and the horizontal line, in such cases, would, in some instances, be larger than in man.

Blumenbach's conclusion, however, that, from the direction of the facial line, viewed laterally, not much is to be deduced, is an egregious error.

If the rule be applied merely to the discrimination of national crania, there is much truth in his observation—it does not answer the purpose of distinguishing the varieties of the human race; but, when applied to animals in general, as indicating some of their intellectual faculties, it acquires considerable interest, and when used to discover the finer forms of the head, and as a guide to taste in the arts, it is of great value.

In fine, says Blumenbach, Camper himself, in the plates subjoined to his work, has so arbitrarily and inconstantly used his two normal lines — so often varies the points of contact according to which he directs these lines, and upon which all their power and justness depends, that he tacitly confesses himself uncertain and hesitating in the use of them.

Still, as already stated, the rule of Camper applies better to the genera of animals in general, than to the varieties of the human species.*

* As of minor importance, I throw into a note Cuvier's mode of applying the principle of Camper.

We may, says Cuvier, discover more important relations in considering the calvarium and the face under the vertical and longitudinal section of the head.

With respect to their relative proportions, the calvarium, in this section, occupies an area sometimes greater, sometimes less, and sometimes nearly equal to that of the face.

In the European, the area of the section of the calvarium is almost four times greater than that of the face, the lower jaw not included.

In the Negro, the calvarium remaining the same, the area of the section of the face is increased about one-fifth. In the Calmuc, it increases only one-tenth.

The proportion is less in the orang-outang. In the Sapajous, the area of the face is almost one-half of the calvarium. It is

We have thus seen, that the facial angle of Camper is, with respect to the brain, most important in the human species and the quadrupeds, because they alone have very small frontal sinuses, which do not elevate the facial line in a sensible degree in the mandrills, and in most of the carnivora, except in the varieties of short-nosed dogs, as the pug, which have the face somewhat smaller in proportion to the calvarium. The rodentia, the hare, and the marmotte, have it one-third larger. It is more than double in the porcupine. It is nearly double in the ruminantia; a little more than double in hogs; nearly triple in the hippopotamus; and almost quadruple in the horse.

The outline of the face when viewed in such a section as we have just mentioned, forms, in man, a triangle, the longest side of which is the line of junction between the calvarium and face. This extends obliquely backward and downward from the root of the nose toward the great hole of the scull. The front of the face, or the anterior side of the triangle, is the shortest of the three.

The face is so much elongated, even in the monkey, that the line of junction of the calvarium and face is the shortest side of the triangle, and the anterior one is the longest. These proportions become still more considerable in the other mammalia.

The morse and the elephant have a large face, in consequence of the height of the alveoli; but it cannot in them, be considered as augmenting the extent of the organs of sense.

This method is applicable only to the scull, and therefore of little practical value.

degree, and because in them the nose falls under that line. It will in the sequel appear, that, even when applied to them, this angle is of the less value, that it affords no mode of distinguishing the capacity of the cerebrum from that of the cerebellum.

Yet as minerals exist, and are arranged from mere structure,—as plants exist and live, and are arranged from vital organs, their cotyledons or their flowers,—and as animals exist, live, and think,—they ought, in conformity with the preceding classes, to be arranged from mental organs.

As plants are arranged according to those organs which they possess in addition to minerals, viz. their vital organs, so, if consistently with this, animals were arranged according to those organs which they possess in addition to plants, viz. their mental organs, they would at once be distinguished from each other, and have indicated their most remarkable characteristic, and their rank in the scale of being.

Nor would this be difficult : the various capaci-

62 APPLICATION OF THESE PRINCIPLES, ETC.

ties of the cranium alone would afford its basis for all the higher animals. Such a method would not merely present some general differences among animals, but would afford the most accurate distinctions even between their varieties, and it would then exhibit not only physical but mental character.

The value of the method may be appreciated from the application made of it to the varieties of the human race in the following part of the work.

CHAPTER IV.

APPLICATION OF THESE PRINCIPLES TO THE
SEXES.

WITH regard to the different character of male and female crania, I have observed, that, when the cavity of the male and female cranium is of equal length, the portion before the cavity of the pituitary gland, which is always nearly in the middle of that basis, is longer in the male than in the female ; while that behind it, is longer in the female than in the male.

In the anterior part of the cavity, thus longer in the male than female, are lodged those médullary fasiculi through which impressions ascend to the common sensorium ; and, in the posterior, thus

longer in the female than male, those through which they descend.*

Now, as nervous action must take place more rapidly and intensely through the compressed and narrow cerebrum — more slowly and permanently through the broad or wider one,—it is probable, that the ascending impressions are stronger in the male — the descending, in the female; and, in perfect conformity with this, we find that more numerous and stronger impressions in the male, more rarely and weakly excite emotions and passions ; whereas fewer and slighter impressions in the female, more frequently and more strongly excite them.

As the male cranium is widest posteriorly, even in cavities of equal length, the rarer and weaker emotions and passions of the male are, consistently with the preceding doctrine, more permanent than those of the female.

The female calvarium seems in general also nar-

* See the report of the committee of the National Institute of France, on Gall and Spurzheim's paper on the brain, with critical observations, in the Archives of Universal Science, for July, 1809.

rower than that of the male; and hence, all her mental operations, though more intense and brilliant during their continuance, have, on the same principles, less of permanence.

With regard to the heads of females, it may also be observed, that the frontal sinuses are less, the glabella less elevated, and the superciliary ridges on which the eyebrows rest less prominent; that the alveolar outline of the upper and lower jaws is more elliptical; that the teeth are less; and that the ossa linqualia, os hyoides, or bone of the tongue is smaller.

CHAPTER V.

APPLICATION OF THESE PRINCIPLES TO THE
VARIETIES OF THE HUMAN SPECIES.

ENDEAVOURING to apply his principles to the varieties of the human species in particular, Camper says, it would be impracticable to delineate all the characteristic varieties that exist in nature. — We may therefore

1. Consider the Calmuc as being, with regard to the form of his head, the representative of all Asia (from Siberia to New Zealand), and also of North America ; as it is more than probable that the people of that country are descended from the northern Asiatics. Of this variety, the facial an-

gle is, according to Camper, less than that of the following one.*

2. The head of an European may be considered as a specimen of all Europe, Turkey, Persia and the largest part of Arabia, as far as Indostan.— Of this variety, the facial angle is greatest.

3. The head of an Angolese negro may be substituted for all Africa, also for the Hottentots (who do not materially differ from the Negroes), for the Caffres, and for the natives of Madagascar. — Of this variety, the facial angle is least.

The Moluccans seem to have blended together the characteristics of the Asiatic and of the African ; and Blumenbach, as will be seen, avails himself of this hint to form them into a different variety.+

Now, although the mere use of Camper's facial line by no means affords sufficient marks of dis-

* This assertion has induced Sömmerring to say “Calvaria Petro Campero calvaria Calmucci visa ab eodemque delineata et descripta, calvaria potius Nigritæ videtur.”

+ Camper, in his *Dissert. sur les Variét. Nat. de Physion. des Hommes*, etc. p. 16 et 17, Paris, 1792, 4to, mentions not only this variety, but also the American.

tinction, his division is remarkable for its simplicity and correctness.

Such, then, is the arrangement of Camper. But it may not be improper to subjoin the criticisms which Blumenbach has made respecting it.

With regard to the inapplicability of the facial line to these varieties, Blumenbach objects, that this rule labours under more than one fault.

1. This facial line does not accurately apply, except to those varieties of the human race which vary from each other, in the direction of the jaws ; and by no means to those which, on the contrary, are remarkable for a face drawn out laterally.

2. Very often, in the crania of nations entirely different, the facial line possesses the same direction ; and, on the contrary, in many crania of the same people, which, in general, agree in habit, that line is extremely different.

Thus, says Blumenbach, I possess a couple of crania, viz. of a Congo *Æthiop* and a Lithuanian Sarmatian, (Pole) both of which have nearly the same facial line, yet their habit is extremely different, if you compare the narrow and, as it were,

carinated head of the *Æthiop* with the more square one of the Sarmatian.—On the contrary, however, I have other two crania of *Æthiops* possessing a facial line wonderfully differing from each other, but both, if viewed from before, having the narrow and compressed skull, the arched forehead, &c. testifying their *Æthiopic* original.

The rule of Camper, therefore, will not answer the purpose of distinguishing the varieties of the human race. Nevertheless, his division of these varieties into three is excellent.

Blumenbach says; that the national varieties of the face, although liable to particular exceptions, are naturally reducible to five, which may be considered as the heads or sources of the other less important varieties.

There exists, in the first place, a kind of symmetrical countenance, constituting, as it were, the middle one, which, by degenerating, passes into two extremes very different from itself, of which one exhibits the face drawn out laterally, the other stretched out inferiorly.

Thus far Blumenbach follows Camper.

Each of these last, however, again includes two different varieties, very distinguishable from each other when viewed in profile! One of these varieties has the nose and other parts less distinct, and, as it were, confluent. The other exhibits the same parts more deeply excavated, and angularly projecting.

These make, besides the first middle one, four other varieties.

As the bones accommodate themselves to the neighbouring parts, and, in some measure, receive form from their action, there is an intimate relation between the external face and the osseous structure on which it is formed.

From examining, therefore, the crania of different nations, much additional light is thrown on the study of the varieties of the human race, because they exhibit the firm and stable foundation of the head deprived of soft and less constant parts, and may be conveniently handled and examined, considered under different aspects, and compared with each other.

All the diversities, then, of the osseous head of

IV.

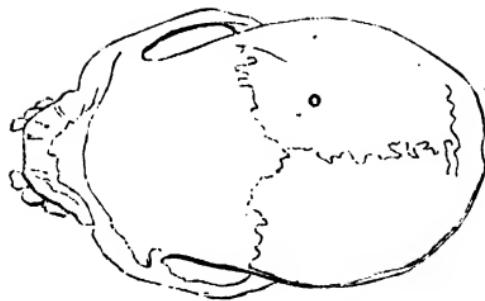


FIG. 2.

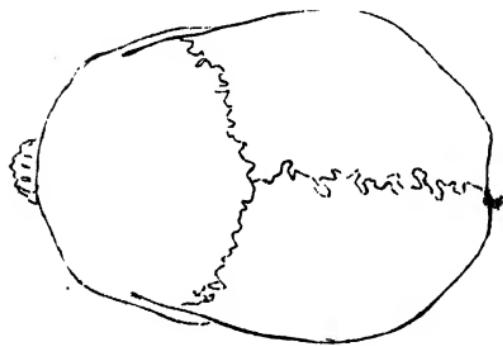


FIG. 3.

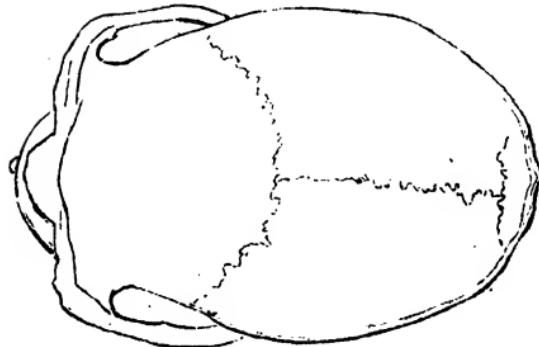


FIG.

BLUMENBACH'S VERTICAL RULE.

different nations, according to Blumenbach, are, like those of national countenance, reducible to five principal varieties.

In distinguishing the characters of different crania, such a view is preferred as offers, at one glance, the most numerous and important points, and those especially which contribute to the comparison of national characteristics. Blumenbach has, accordingly, found that view to be the best adapted to this purpose, in which, from behind the vertex, we observe crania having their cheek-bones placed in the same horizontal line, arranged in a series. In this view, whatever most contributes to the national character of skulls, whether the direction of the jaws or of the cheek bones, the breadth or narrowness of the calvarium, the smoothness or tuberosity of the forehead, &c. at one glance, so distinctly strikes the eye, that he calls that aspect the Vertical Rule.

This rule is exhibited in the figures of Plate IV, where three heads are represented in this point of view. The second of the three (fig. 2), distinguished by the symmetry and beauty of all its parts, is that of

a Georgian female. The other two are examples of heads differing from this in the opposite extremes. That which is expanded laterally, and flattened in front (fig. 1.), is the cranium of a Tungoose from the north-east of Asia. That which is elongated in front (fig. 3), is the head of a Negress, from the coast of Guinea. The margin of the orbits and the zygoma are elegantly contracted in the Georgian ; and the jaws are hidden by the periphery of the moderately expanded forehead.* In the Tungoose, the ossa malarum, ossa nasi and glabella, are situate on the same horizontal level, and are enormously expanded on either side. In the Æthiopian, on the contrary, the maxillary bones are compressed laterally, and project in front.

There are, then, according to Blumenbach, five principal varieties of the human race, but merely one species ; and the innumerable less varieties of this species mingle together by insensible gradations.

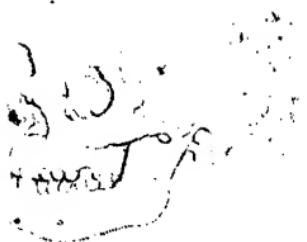
These varieties are the Caucasian, the Mongolic, the Æthiopic, the American, and the Malaiac, equally capable of being defined and distinguished from each other. [See Plate V.]



MONGOLIAN
OF THE MONGOLIAN VARIETY.



CARIBBEAN
OF THE AMERICAN VARIETY.



CAUCASIAN
OF THE CAUCASIAN VARIETY.



OTHELTAN,
OF THE MALAYIC VARIETY.



GUINEAN,
OF THE ETIOPIC VARIETY.

BLUMENBACH'S VARIETIES OF MANKIND.

The Caucasian, of symmetrical countenance, Blumenbach places first; as to be considered the primitive one.

This passes, on each side, into two very remote and different extremes; on this, namely, into the Mongolic, of which the countenance is broad; on that, into the *Æthiopic*,* of which the countenance is narrow.

Other two hold middle places between that primitive one and these two extreme varieties; namely, the American, having the countenance moderately broad, between the Caucasian and Mongolic; and the Malaiac, having the countenance moderately narrow, between the Caucasian and *Æthiopic*.

In the explanation of the characters of these, Blumenbach cautions us; first, that, on account of the multifarious diversity of characters, by various gradations, it is not this or that detached one which will suffice, but that many, considered together, are necessary; and secondly, that not

* These three varieties are precisely correspondent to those first proposed by Camper, and may perhaps be sufficient without the following ones.

even this complex character is so constant as not to be liable to innumerable exceptions in all and each of these varieties. Nevertheless, this is to be so understood, that it may in general permit a sufficiently simple and perspicuous notion of them.

These more particular characters will be detailed in the sequel.

In arranging his varieties, Blumenbach would, perhaps, have done well to place the Mongolic first, the American next, the Caucasian in the middle, then the Malaiac, and lastly the *AEthiopic*.

To the principles, however, of the theory of Blumenbach, I have not one objection to urge, but that they are imperfect, and consequently insufficient for the decided establishment of his system. So far as they go, however, they are very valuable.

The methods, then, of Albert Durer, Daubenton, Camper and Blumenbach present successive improvements, yet all of them appear to me defective, because not only do they fail in clearly exhibiting many of the more important relations between the calvarium and face, but they do not at

all permit us to ascertain those which subsist between the cerebral and cerebellic cavities, or between each of these and the face; and as each of them contains an intellectual organ totally distinct in its functions, it is evident that, if the relations between the two cavities, and between each and the face, be neglected, then the relations between the intellectual functions which they perform, or the relative degree of each function, must likewise be lost.

Thus, though, by these methods, the varieties of the human species may be indicated with tolerable success, yet the most valuable conclusion to be drawn from their physical form—a criterion of their degrees of intelligence, cannot by these means, be obtained.

The three criteria, however, of sense, intellect, and voluntary motion which I have already described, are strictly and beautifully applicable to the varieties of the human species.

The area of the cerebral cavity of the European scull is uniformly greatest, compared to the area of the face and of the cerebellic cavity; while *Aethiopic*

and Mongolic crania, without differing in general relative magnitude (for what the Mongolic has in breadth, the *Æthiopic* has in length), seem strikingly to differ in this, that the area of the face is actually greatest in the *Æthiop*, compared to the area of the cerebral and of the cerebellic cavity, while the cerebellic cavity is actually greatest in the Mongol, compared to the area of the face and of the cerebral cavity.

Thus, the *Æthiop*, having proportionally the largest organs of sense, ought to have the strongest sensation; the European, having proportionally the largest cerebrum, ought to have the greatest intellect; and the Mongol, having proportionally the largest cerebellum, ought to have the greatest volition.

All this is confirmed by the habits of these varieties; for, while the northern people have the dullest sensations, they are the most active on the earth; and while the Negroes have the acutest sensation, they are the most indolent.

It remains only to explain the difference in intel-

lect between the Mongol and Æthiop, since, while their cerebral cavities are, upon the whole, of equal magnitude, that of the Mongol is broad, and that of the Æthiop long.

Now, it has, in enunciating that principle of this work which is next in importance to the preceding, been shown, that the permanence of functions is as the breadth of organs, and the intensity of functions as the length of organs ; and it is at the same time known, that the Mongolic and Æthiopic races are correspondingly distinguished.

I propose the arrangement of the human race into three varieties, founded at once upon physical form and moral habit—the physical form of three different organs, namely, those of sense, the cerebrum, and the cerebellum ; and the consequent energy of the sensitive, perceptive, and voluntary powers, exercised by these organs.

That form and this energy, I propose as the basis of all such classification, in lieu of the merely physical, and these, too, insulated bases of Camper, Blumenbach and others ; and whether it lead

to the adoption of three, or five, or any greater number of varieties, is immaterial. The nature of the basis is that for which alone I contend. It moreover, not only affords a scientific and natural classification of the human race, but presents the principles of a natural, simple and impressive system of national physiognomy.

It is here proper to explain, why, though we were to arrive at the same conclusion, with either Camper or Blumenbach, as to the number of these varieties, it is, nevertheless, necessary to reject their bases or principles, to form new ones, and to draw an independent conclusion.

The fact is, that the bases or principles of classification, delivered by these physiologists, are imperfect and erroneous, even physically considered. The relative magnitude of the cerebellum is utterly neglected by Camper; and the relative magnitude, neither of the organs of sense nor of the cerebellum, can be correctly ascertained by the Vertical Rule of Blumenbach.

If, then, by the principles of the one, a third of

the intellectual organs—those of sense, are excluded, and by those of the other, two thirds,—both organs of sense and cerebellum, are placed nearly in the same situation, it incontestably follows, that the principles adopted by both are defective, and that the conclusions drawn from them must be erroneous, even in a physical point of view.

Now, as we have succeeded in showing, not only that one or other of the three great intellectual organs, but also that one or other of their functions, excels, respectively, in the Mongol, the European, or the *Aethiop*, it irresistibly follows, that Camper and Blumenbach have neglected moral or mental principles, as well as physical ones, and of no less importance than they.

Thus, the classification here established differs from theirs, both as to physical character and moral result; and it is attended with advantages of which they had no conception.

It is here only necessary further to remark, that, than this difference of the physical character of the head, and the powers of the mind dependent upon

it, no nobler basis could be adopted for the arrangement of the greater part of Natural History.*

* CHARACTERS OF THE MONGOLIC VARIETY.

Physical Character.

The organs of sense — small.

The cerebrum — broad, but flat.

The cerebellum — large.

Proofs of this character.*

Organs of sense.

In the Negro, the cranium remaining the same, the area of the section of face is, according to Cuvier, increased about one-fifth, while, in that of the Calmuc, it increases only one-tenth: in northern nations, the face is, therefore, comparatively small.

"The nearer the Tartars are to the pole," says Smith, "the smaller are their eyes, and the shorter their noses."†

Blumenbach says the Mongolic nations have the nose small — "Simus et depressus."

The orbits of Russians are, according to Sömmering and others, contracted; the teeth are small; and the horizontal part of the palate-bone narrow.

Cerebrum.

The cerebral cavity of northern nations is, according to Professor Camper's observations,‡ broader, but less elevated, than that of the *Aethiopic* ones.

The vertex or crown of the Calmuc cranium, according to Blumenbach, also is depressed.

* These facts are chiefly selected from authors who have had no particular theory in view, and who, in stating them, are therefore, the more unlikely to have been misled by any improper bias.

† Unpublished Commentaries on Osteology.

It is contrary to sound philosophy, which, without necessity, never assigns different causes for similar events, to have recourse, for explaining these varieties, to the hypothesis of several original spe-

So also, according to the same anthropologist, is even the American, belonging to his *next* variety.

Cerebellum.

The cerebellic cavity of those people is large. Blumenbach describes the occiput of a Tungoose as “ mirum in modum retro eminens, ita ut protuberantiae occipitalis externae distantia a dentibus incisoribus superioribus 9 pollices Lond. æquaret.”

To the Esquimaux, he assigns also a protuberant occiput.

Moral character.

Sensibility — small.

Observation — permanent, but not intense.

Volition — powerful.

Proofs of this character.

Cold, by preventing the moisture of perspiration, and by corrugating the skin so as to cover the extremities of the cutaneous nerves, blunts the sense of feeling, and tends greatly to diminish the sensibility of the system.

“ In cold countries,” says Montesquieu, “ they have very little sensibility for pleasure : in temperate countries, they have more : in warm countries, their sensibility is exquisite. As climates are distinguished by degrees of latitude, we might distinguish them also, in some measure, by degrees of sensibility. I have seen the operas of England and of Italy ; they are the same pieces and the same performers ; and yet the same music produces such different effects on the two nations,

cies; and an attachment to such a doctrine, simply because it opposes a tenet of religion, is unphilosophical in the extreme.

one is cold and indifferent, and the other so transported, that it seems almost inconceivable."*

This diminished sensibility accords with the less development of the organs in these people.

Though the natives of cold climates are less readily affected than southern nations, their impressions are more permanent. The impulse must, indeed, be strong to produce any effect; but when the impression is once made, it engrosses more of the attention, and is not liable to be effaced by subsequent ones.

The inhabitants of cold countries are more fixed and steady in their resolutions than those of hot.

The diminution of sensibility contributes to make the people who live in cold countries less timid.—Slight impressions scarcely affect them; and the motives which would deter an inhabitant of a hot country from an enterprise, never reach the sensation of one of a cold climate. The disposition of the northern nations to despise the fear of death, was remarked by several ancient writers, and particularly by Lucan.

This greater permanence, though less intensity of mind

* Gmelin, Lentilius, Linné rapportent, says M. Virey, des Sibériens, des Courlandais, des Lapons, que les medicaments les plus héroïques, les purgatifs drastiques, que seroient même d'affreux poisons pour les méridionaux agissent à peine, sur ces corps d'airain. Une piqûre légère, au contraire, suffit pour exciter chez les Indiens des convulsions universelles.

That climate is the cause of most of the peculiarities of the moral character of nations, has

than in the natives of southern regions, accords remarkably with the greater breadth, though less length or height, of the cerebrum in these people.

Cold climates are averse to indolence, at least of the body, and produce a habit of exertion and activity.

"A cold air," says Montesquieu, "contracts the fibres, and increases their force. On the contrary, a warm air relaxes the fibres, and diminishes their force and elasticity."

"People are, therefore, more vigorous in cold climates. This superiority of strength produces greater self-confidence, that is, more courage; a greater sense of superiority, that is, less desire of revenge; a greater opinion of security, that is, more frankness, less suspicion, policy, and cunning."

Repose and shade are the securities from heat; fire and exercise the remedies of cold: so that the necessities of the climate itself contribute to form the character of the people.

This greater energy of voluntary action perfectly accords with the increased development of its organ — the cerebellum, in these people.

In short, all the habits of the Mongolic variety agree with the relative magnitudes of the organs of sense, cerebrum and cerebellum, and afford the strongest confirmation of the theory which has been delivered.

Nations included in this variety.

This variety embraces the inhabitants of the eastern and of the northern parts of Asia, the Finnish people, Laplanders, &c.

already been repeatedly hinted, in considering the character of the Mongolic, Caucasian, and Æthiopic varieties.

•

of Northern Europe, and the nation of the Esquimaux widely diffused over the most northern parts of America, from the Strait of Behring to extreme inhabited Greenland.—The Americans should perhaps be here included.—See Plate VI. Fig. 1.

CHARACTERS OF THE CAUCASIAN VARIETY.

Physical Character.

Organs of sense — of moderate size.

Cerebrum — both broad and elevated.

Cerebellum — of moderate size.

Proofs of this Character.

These are afforded by the account already given of the physical character of the Mongolic and that which will be given of the physical character of the Æthiopic variety; for all the expressions employed in describing the organs in these two extremes, avowedly refer to the Caucasian head as of intermediate proportions.

Moral Character.

Sensibility — Moderate.

Observation, &c. — Powerful.

Volition — Moderate.

Proofs of this Character.

The natives of moderate climates possess a middle degree of sensibility between those of cold and those of hot ones.

The temper also of the people of moderate climates is of a middle nature, between the fiery passion of the south, and the coldness and patience of the north.

On a little reflection, it will readily be granted, that a cold climate tends at once to blunt sensibility and to increase voluntary power, while a hot cli-

This moderate sensibility perfectly accords with the moderate development of these organs in this variety.

Of the intellectual faculties, even Galen has remarked the great superiority in the inhabitants of the temperate zone, over those both of the torrid and frigid.

Aristotle also observes, that extremes of temperature are unfavourable to the powers of the mind. All history confirms its truth.

The people of moderate climates, though inferior in passive courage to those of cold, are, from superiority of intellect, more able to take advantage of their success. Vegetius recommends the choice of soldiers from temperate climates, from their possessing both active courage, and the understanding necessary to improve advantages.

This superiority of intellect perfectly accords with the great capacity of the cerebral cavity in the Caucasian variety.

The degree of activity of the inhabitants of moderate climates, is less than that of the inhabitants of colder climates in general, and greater than that of the inhabitants of hot regions.

This moderate voluntary action perfectly accords with the moderate capacity of the cerebellic cavity.

In short, all the habits of the Caucasian variety agree with the relative magnitudes of its organs of sense, cerebrum, and cerebellum, and likewise afford the strongest confirmation of the theory which has been delivered.

mate tends to increase sensibility and to diminish voluntary power. Hence, the moral characteristics of the Mongol and Ethiop.

Nations included in this variety.

The Europeans (except the Laplanders and the rest of the Finnish race), the western Asiatics, or those on this side of the river Obi, the Caspian sea and the Ganges, and the inhabitants of northern Africa — in short, the inhabitants of the world as known to the ancients, belong to this variety. See Plate VI. Fig. 3.

CHARACTERS OF THE ÆTHIOPIC VARIETY.

Physical Character.

Organs of Sense — large.

Cerebrum — long, but narrow. *

Cerebellum — small.

Proofs of this Character.*

Organs of Sense.

The head of the Negro is, according to Sömmerring, larger in proportion to his body than that of the European; but his face is larger in proportion to his calvarium.

The jaw-bones, and the cavities which contribute to form and to protect the organs of sense (whether considered absolutely, or with reference to the rest of the head), are, according to the same anatomist, constructed on a larger scale in the Negro.

* Whenever no name is attached to any of the following statements, Sömmerring is, in general, the author of the observation. The facts derived from him are numerous and important. From so many facts, it is certainly strange that he himself should have drawn no important conclusion.

As the Caucasian inhabits an intermediate temperature, his mind is but feebly marked by either

The alveolar processes of the upper jaw are considerably protuberant, and form a characteristic trait in the Negro's physiognomy.

The lower jaw, which is broad, thick and less uniform on its surface, is shortened at the sides and extremity. The angle of the jaw, which in us is generally obtuse, approaches nearer to a right angle; that part of it which is covered by the masseter, being unusually broad in the Negro, as well as in the ape.

The teeth are generally sound, and compose a very compact row. They are broad, thick, and long; more especially the canine teeth.

The roof of the Negro's mouth, which is perhaps wider, is evidently of greater length, and is sculptured with deeper inequalities than that of the European.

The tongue, as might be expected from the parieties which enclose it, is larger in the Negro than in the European.

The nostrils are wide.

When the head is seen in front, the cavity of the nose appears uncommonly large.

The choana, or passage by which the nose and mouth communicate, is of a size equally remarkable with the external aperture of the nose.

That nature intended him to possess a more exquisite sense of smell than his European brethren, is evident from the size and configuration of the ossa turbinata superiore.

Haller, and a multitude of other authors and travellers remark, that Negros in the Antilles, can distinguish, by scent, the footstep of a Negro from that of a European. The strong

of these characteristics, and consequently the intermediate—the only remaining intellectual function—is in him called into the most powerful action.

cutaneous exhalation of the former, must here be their principal guide.*

The orbit is, according to Sömmering, deeper; the line described by its margin is of greater length, and the eye itself is probably larger in the Negro than in the European.

In the Negro, the aperture of the eyelids is smaller than in the European, and, of course, less of the eye is visible. The eye-ball is, perhaps, larger.

Dr. Walter thinks, that the retina is of a more robust texture than in Europeans.

The ear is of more circular shape than in Europeans, and resembles somewhat more closely, the same organ in apes. It seems frequently to project farther than usual from the head. It is a well known fact, that Africans possess the sense of hearing in great perfection.

The meatus auditorius externus is wider, although the whole os temporis is less than in Europeans.

The nerves on the basis of the brain, in comparison with those of Europeans, under like conditions, appear somewhat thicker. This difference, which is most striking in the olfactory, optic, and fifth pairs might be presumed from analogy; for, if the eye, ear, and organ of smell be larger, as has been

* Prosper Alpinus says of the Egyptians, “Ungent vulvam moscho, ambaro, zibetho ad corrigendum foetorem, et ut coeuntibus concilient.” From them, in all probability it was, that this custom, mentioned by Seneca, was borrowed by the Roman ladies.

These truths, philosophers have often hinted at ; but they have altogether failed to mark, in the different varieties, the relative magnitude of the or-

stated, we must expect that the nerves, which supply these organs, will have correspondent magnitude.

Cerebrum.

The cerebral cavity of the *Aethiop* is, according to my observations, longer, and, according to Camper's, at the same time narrower, than that of the Mongol.

The *Aethiopic* scull, viewed in front, appears to be compressed at the sides, especially at the upper part ; its cavity seems to be straighter ; and the parietal bones are smaller in every dimension, than in European sculls.

The impression left by the attachment of the upper margin of the temporal muscle, extending from the *os frontis* over nearly the whole of the *os parietale*, is deeper, and ascends nearer to the sagittal suture in the Negro, than in the European.

The extraordinary height and circumference of the zygomatic arch can leave little doubt that the bulk of the temporal muscle is likewise very considerable. On this cause depends the protuberance of the cheek bones, which are uncommonly large, and nearly quadrangular.

None of the muscles of the face, except the masseters and those of the external ear, are uncommonly large.

Sömmerring found the length of a cord passed from the root of the nose, over the middle of the *os frontis*, and along the sagittal suture to the middle of the posterior margin of the *os occipitis*, to be less in the Negro than in the European. The vertical arch is, therefore, smaller. In selecting the speci-

gans which perform the above mentioned functions. This was alone necessary to establish the

mens to be compared, care was taken that the bones of the face were of equal length.*

The circumference of the *Aethiopic* scull, ascertained by a cord passing horizontally over the eye-brow and the upper margin of the *os temporis*, is considerably less.

Neither the largest diameter of the scull, from the *os frontis* to the *os occipitis*, nor any smaller diameter from one *os parietale*, or *os temporis*, to the other, attain the size they possess in the European.

The principal bones which form the cavity of the cranium, are collectively smaller. The *os frontis*, *ossa parietalia* and *os sphenoides* appear smaller; although the *ossa petrosa* and the *os ethmoides* seem larger.

These bones possess a hard, compact and brittle texture, like those of quadrupeds.

From the preceding remarks, we may infer, that, in the Negro, the size of this cavity bears a smaller proportion to the face and organs of sense, than it does in the European.

It must be allowed that the cavity of the Negro's scull exceeds, in length, that of the Mongol.†

* They should certainly have been of greater length in the *Aethiopic* heads selected by Sömmerring; for, in them, it is the tendency of the jaws to exceed, in proportional magnitude, all the other parts. The *Aethiopic* heads, in which the jaws were no longer than those of Europeans, must have been diminutive; and the vertical arch of their calvarium is thus rendered too small.

† Dr. Walter, like his predecessor Dr. Meckel, observes that the medullary substance of the brain of a Negro he dissected, was of a firmer texture than usual, and possessed that degree of elasticity which sometimes occurs in the brain of lunatics.

natural theory of the causes of the varieties of our species.

True it is, that the proofs which I have below ad-

Cerebellum.

Professor Lichtenberg has observed, that, in the Negro (as if a portion of the hind part of the scull were removed) the depression between the head and shoulders is much less considerable — a conformation exhibited by animals of the ape tribe in a still more remarkable degree.

Sömmerring repeats the observation.

When the cavity of the European and Æthiopic cranium is of equal length, I have found that the cerebellic cavity of the Æthiopic, measured between the posterior clinoid process and the inside of the spine dividing the cavity posteriorly, is shortest; but it does not seem to be proportionally narrower.

The Mallikolenses have also, according to Forsters, a compressed occiput.

In the Negro, the foramen magnum appears to lie not quite so forward as in us.

An Æthiopic scull, after the maxilla inferior is removed, being laid on a table, falls backward, so that the teeth do not touch, but are suspended at the distance of more than a line above the surface of the table. The sculls of Europeans of mature age, usually incline forward, and rest with equal ease on the teeth, or on the os occipitis. All Æthiopic sculls, however, do not possess the property described.

Moral Character.

Sensibility — extreme.

Observation, &c. — not permanent, but intense.

Volition — weak.

duced of the relative magnitude of the organs are chiefly collected from Camper, Blumenbach, Söm-

Proofs of this Character.

Heat, by keeping the skin moist with perspiration and smooth, exposes the extremities of all the nerves, and increases the faculty, as well as the accuracy of sensation.

The existence of the Africans, says Jefferson, appears to participate more of sensation than reflection.

The passionate temper of these people, observed from the earliest antiquity, and mentioned by Hippocrates, arises from the sensibility thus induced. This is observable even among the Italians in Europe, and among West Indians descended of European parents.

This increased sensibility accords with the greater development of the organs of sense in these people.

The levity or inconstancy of mind so remarkable in warm climates, is dependent on the same sensibility. The mind is there open to all impulses; but as these succeed one another rapidly, none of them make any very permanent impression, but efface one another in succession. The griefs of the Negroes, says Jefferson, are transient.

The sensation of weakness also discourages all exertion of body or mind, by suggesting the idea of inability; and this idea, joined with a sensibility which weakness contributes to heighten, produces that timidity of character, for which, as Machiavelli observes, the people of hot climates are remarkable.

To me, says Jefferson, they appear in reason much inferior to the whites, as I think one could scarcely be found capable

merring and others. Unfortunately, however, it is not more to be wondered at, than to be regretted,

of tracing and comprehending the investigations of Euclid.— Yet many have been so situated, that they might have availed themselves of the conversation of their masters; many have been brought up to the handicraft arts, and from that circumstance, have always been associated with the whites. Some have been liberally educated, and all have lived in countries where the arts and sciences are cultivated to a considerable degree, and have had before their eyes samples of the best works from abroad. Never yet could I find a black who had uttered a thought above the level of plain narration; never seen even an elementary trait of painting or sculpture. We know that, among the Romans, about the Augustan age especially, the condition of their slaves was much more deplorable than that of blacks on the continent of America — yet their slaves were often their rarest artists. They excelled, too, in science, insomuch as to be usually employed as tutors to their masters' children. Epictetus, Terence and Phædrus, were slaves; but they were of the race of whites. It is not their condition, then, but nature which has produced the distinction.

That the effects of imagination, however, are less apparent among the Africans, must be imputed to their want of intellect and not of imagination itself. Music — at least music of the more common and national kind, depends solely upon imagination and an ear; and the power of composing it proves the existence of both. Jefferson, accordingly, grants that, "in music, they are more generally gifted than the whites with accurate ears for tune and time, and they have been found capable of imagining a small catch." Humboldt particularly

that these excellent anatomists have not, in any one instance, traced the relative magnitude of these three organs even in a single variety of the species.

ascribes imagination to them, as will be seen in the sequel. Indeed such striking effects of imagination, amidst such want of intelligence, decidedly proves the former to be one of their mental characteristics.

This greater intensity, though less permanence, of mind than in the inhabitants of cold climates, accords remarkably with the greater length, though less breadth, of the cerebrum, than in these people.

Indolence is a striking characteristic of the natives of hot climates,—seemingly interwoven into their ~~very~~ constitutions.

“The country, says an intelligent observer, certainly produces cotton, and might be cultivated with that article; but it would be a very difficult thing to get the natives to cultivate any quantity.—The only piece of ground I ever saw cultivated with cotton in Africa was my own planting, which might be the size of the floor of this house. I would have given the natives ten times the value of it, if they would have gathered it for me, but nothing could tempt them to gather it.”

This less energy of voluntary action perfectly accords with the less development of its organ—the cerebellum, in these people.

In short, all the habits of the *Aethiopic* variety agree with the relative magnitudes of its organs of sense, cerebrum, and cerebellum; and they also afford the strongest confirmation of the theory which has been delivered.

All their observations with regard to these, have been detached or insulated ; they have not thought

Nations included in this variety.

To this variety, all the Africans, except the northern ones belong.* See Plate VI. Fig. 5.

RECAPITULATIONS OF THE CHARACTERS OF THESE VARIETIES.

The Mongolic Variety has

The Organs of Sense — small ;

The Cerebrum — broad, but flat ;

The Cerebellum — large :

Sensibility — small ;

Observation, &c. — permanent, but not intense ;

Volition — Powerful.

* Other Peculiarities.

Delicacy prevents my translating the following paragraph of Blumenbach, and obliges me also to use the same language for my remarks on it.

" Nigritas mentulatiores esse vulgo fertur. Respondet sanc huic aserto insignis apparatus genitalium *Aethiopis* quem in supellectile mea anatomica servo. Num vero constans sit hæc prærogativa et nationi propria nescio. Venere ardentes feminas amplexus Nigritarum aliis præferre, dictum est. — Vice versa, etiam *Aethiopissas* et Mulatas maxime ab Europeis expeti, relatum accepimus. Causam præstantiæ, quæ varia esse potest, *ignoro*. — Anne in eo similes Mongolicis et Americanis nonnullarum gentium feminis, de quibus prædicatur quod arcta servent muliebria etiamsi nuptæ fuerint"!!!

Mira Blumenbachii modestia ! Sed docet physiologiæ rerumque scientia, muliebria arcta servare impossibile esse in feminis cujusvis nationis, dum urant igniculi Amorum, et sese ad aras Veneris feminæ prosternant. Minime omnium possibile est in feminis Africæ, ubi Cupidines regnant indomiti, et fibrae sunt laxiores quam seminarum incolentium regiones positas sub Septentrionibus. Adscriptæ præstantiæ causæ sufficientes sunt, harum seminarum et sensibilitas exquisitissima, et ardor insignis, et musculi artusque mobiliores, et novitas formarum amoris.

it necessary to take any general view ; nor to draw any general conclusion.

The Caucasian Variety has
The Organs of Sense — of moderate size ;
The Cerebrum — both broad and elevated ;
The Cerebellum — of moderate size :
 Sensibility — moderate ;
 Observation, &c. — powerful ;
 Volition — moderate.

The Æthiopic Variety has
The Organs of Sense — large ;
The Cerebrum — long, but narrow ;
The Cerebellum — small :
 Sensibility — extreme ;
 Observation, &c.— not permanent, but intense ;
 Volition — weak.

Or, to take another view of the subject. The organs of sense are small in the Mongol ; intermediate in the European ; and large in the Æthiop.

The cerebrum is flat in the Mongol ; large in the European ; and narrow in the Æthiop.

The cerebellum is large in the Mongol ; intermediate in the European ; and small in the Æthiop.

Sensibility is small in the Mongol ; intermediate in the European ; and extreme in the Æthiop.

Observation, &c. are not intense in the Mongol ; powerful in the European ; and not permanent in the Æthiop.

Volition is powerful in the Mongol ; intermediate in the European ; and weak in the Æthiop.

Now these national forms of crania are in general so constant, that they are even observable in the heads of infants.

Such generalization, with regard to the three great intellectual organs, was, I say, alone necessary to establish the **natural theory** of the causes of the varieties of our species ; for it being a fundamental truth of physiology, that on the healthy magnitude of an organ depends the energy of its function, and reciprocally that the frequent employment of that energy increases the magnitude of the organ, and it having also been shown that each variety evidences a particular function in a higher degree than any other — these truths being established, it was, I say, only necessary to be known, that each excelled as to the magnitude of that precise organ of which it evidenced the highest degree of the function, in order to see that climate produces the physical characteristics of the varieties of our species (that is, the different developement of the intellectual organs, and the peculiar expansion of one in each variety), only be-

Nor is this all : they appear to have been precisely similar among those ancient people who inhabited the same countries in which they are now found to exist.

cause the peculiar necessities of the climate call more frequently into action the function which that organ exercises.

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In a cold country, it is necessary that sensibility should be small, for there are there few objects to make grateful impressions on the senses ; but it is necessary that voluntary power should be great, for, without it, wants could not be supplied, nor vital action maintained. In a hot country, it is necessary that sensibility should be great, for it is every where excited by the most grateful impressions ; but it is necessary that voluntary power should be small, for its exertion is not only useless but painful.—Hence, then, it is, that cold, by diminishing the sensibility and rendering inactive its organs, and by increasing the muscular power and rendering active its organ, diminishes, in the Mongol, the bulk of the organs of sense, and increases that of the cerebellum on which muscular exertion depends ; and hence, that heat, by increasing the sensibility and rendering active its organs, and by diminishing the muscular power, and rendering inactive its organ, increases, in the Æthiop,

the bulk of the organs of sense, and diminishes that of the cerebellum.

Hence, too, it is that those who migrate to new climates, must infallibly assume their peculiar characteristics in a greater or less degree; and these, being communicated to children, are, by the operation of the same causes, still further increased in them, till, after a long succession of ages, they have undergone all the changes which it is the tendency of the climate to produce, and become perfectly assimilated to its indigenous natives. Without this flexibility of animal organs, there could, indeed, exist no such thing as education.

There remains yet another, though less striking, method by which to illustrate this influence of climate in producing the physical characters of the varieties of the species.—On the soil of every region depends the nature of its waters; and its air results from the degree of latitude in which it is placed, its vicinity to the ocean, its elevation above the level of the sea, the direction of its mountains, the exposure of its soil, the course of its rivers, the manner in which it is watered, and the emanations

which take place from its surface. The vegetable productions of every region result implicitly from its soil and its waters, and accommodate themselves to all the changes of its atmosphere. The animals of all regions, equally the creatures of the soil whence their aliment is derived, and still more sensibly modified by every external impression, are, as it were, the living images of their various localities.



CHAPTER VI.

APPLICATION OF THESE PRINCIPLES TO THE
ENGLISH, SCOTTISH, IRISH, AND OTHERS.SECTION I.—*The English, &c.*

THE Arab, the Goth and the Scythian are the races which have peopled modern continental Europe, as well as the British Isles. The first has long belonged to the Caucasian variety of mankind ; the second has done so for a shorter period, and even now retains much of the Mongolic character ; and the third is, to the greatest extent, Mongolic.

A branch of the Arabs, as Phœnicians, Moors, &c. appears, from very remote times, to have occupied not only the southern but the northern shores of the Mediterranean. Spain, long previous to the Romans, as well as now, and, if I mistake not, France, in remoter times—in short, all the country

called Celtica by the most ancient geographers, which seems to have included most of Spain as well as France, was peculiarly theirs.

The Arab, Phœnician, or Carthaginian state of Spain in ancient times is as well known as the Moorish or Saracenic of modern days. The progress and power of that people may, I conceive, be traced by observing,— in Spain the Celtæ of Herodotus, and the Celtiberi, Gallaici and Gallæcia of subsequent writers,— and in France, the Celto-Galatia of Ptolemy, the Celtica of Democritus, Eratosthenes and Strabo, and the Celtæ, Galli and Gallia of subsequent writers,— while another branch perhaps,* the Celtæ Scordisci, similarly advancing, as it would seem, from the same eastern source, occupied the country about the Save and the Drave, in advance of the Getae.

These tribes appear to me to have been the progenitors of all the smaller statured, meagre, swarthy, black-haired and dark eyed people who, under the name of Celts, Gael, &c. occupied at least

* The connection of the term Celt with the Arab may be accidental, and is in this view of no consequence.

western Europe. They are now to be found, little influenced either by climate or intermarriages, in the south of Spain, in France, in Ireland, and in the highlands of Scotland.

This Arabic origin of the purer Gael of Scotland and Ireland, and of the more impure of Wales, will surprise some readers ; but, if they bring together the facts on this subject, as I have done, their surprise will cease. That the Moors and Saracens are more or less of Arabic descent, and that they crossed the Mediterranean and occupied nearly the whole of Spain both in ancient and modern times, are facts disputed by no one. Now, to leave France, and all supposition of its Moorish Celts, and its peopling the opposite British shores,—it seems unquestionable, that the Moorish Spaniards, for they even now are Moorish, and before the Gothic invasion they were far more so, passed over to Ireland, in the south of which every trait of their physiognomy is to be seen ; and the Irish again sent colonies to the highlands of Scotland : even Tacitus suspects the origin of the ancient Welsh to be Iberian — that is Mauro-Spanish. No wonder then,

that even without knowing this, Dr. Macculloch should say of the dark Highlanders "Take the handsomest specimen of these 'men of Ind,' clap a turban on his head, and a pair of loose cotton trowsers on his heels, and he might pass for some Tartar or Afghan."

Physiognomically considered, the whole race is remarkable for length and narrowness of head, and for intensity and vivacity of mental functions. Hence, too, we see, equally in the East and in the highlands of Scotland, tumuli or cairns, the howling over the dead, loose dresses, the love of splendor, &c.

The Goths, under the name of Gutæ, Gothi, Gothones, have long occupied countries on the shores of the Baltic; and if they are of the same race with the Getæ on the Danube mentioned by Herodotus and other ancient historians, and with the Massagetae of Democritus, Herodotus, Eratosthenes, &c. residing on the north east of the Caspian and near to the Sassones on the Jaxartes, it is evident, that, from time immemorial, they have occupied north-eastern Europe and have pressed upon its south-western population. Upon that

population, however, the Gothic, as well apparently as some Sclavonic, tribes burst in, toward the middle of the fifth century, when they either mixed with the ancient races, or drove them to the mountains and to remoter regions.

These Gothic tribes have been the progenitors of the taller, fair-complexioned, yellow, red or brown haired, and blue eyed people of modern Europe; and the portion of them which is most remarkable for these characteristics appears to have occupied north Germany, Holland, and the lowlands of England and Scotland.

Physiognomically considered, these people are remarkable for breadth and shortness of head, and for permanence and slowness of mental functions. In this respect, as well as in relative length of body and shortness of limbs, they still bear considerable resemblance to the Mongolic variety of the human species.

The Scythians, represented by the Russians in modern times, long ago spread themselves into Poland, Bohemia, Prussia, Illyria, Hungary and Turkey; and the great body of them have, since

those times, been advancing with the conquests of Russia.—Some tribes of this kind from the shores of the White Sea have originated those of the people of northern Scotland, who are remarkable for high cheek bones, short noses, sharp chins, and other Russian characteristics.

Thus the population of the British isles has been composed chiefly of two more original races, the Celtic and the Gothic.

Of the arrival of the more ancient colonies, we have no record that can be trusted. The Welsh Triads are too contemptible to deserve any notice ; and the notion of a people who write nothing now when they are half civilized, having written any thing but nonsense when they were savage, is quite absurd. These Triads are of a piece with their ancient poetry, which certainly is the most senseless stuff that ever pretended to the name. And as both of these are constructed with a view to the purity and high antiquity of the Welsh race, though it is a complete mongrel of Celt, Roman, Saxon, &c. with an equally mongrel jargon for a language, the utter worthlessness of both is evident.

Tacitus, in whom some trust may be reposed, speaking of a Celtic race of his own time, the Siluri, a people of South Wales, says, “ Silurum colorati vultus, et torti plerumque crines, et positu contra Hispaniam, Iberos veteres trajecisse, easque sedes occupasse, fidem faciunt :” “ of the Silurians, the swarthy faces, and generally curled hair, and situation opposite to Spain, make us believe that the old Iberians passed over, and occupied those seats.”*

Many ancient authorities may be brought forward to establish the Gothic distinction of yellow or red hair, blue eyes, &c. Tacitus, in describing the Germans, says, that the habit of body, although in so great a number of men, was the same in all—fierce and blue eyes, red hair, large and powerful bodies: “ habitus quoque corporum, quanquam in tanto hominum numero, idem omnibus: truces et cerulei oculi, rutilæ comæ, magna corpora, et tantum ad impetum valida.”† And these continue

* Thus he renders probable their Celtic origin, and traces a portion of that Arabic or Moorish progress to the north, which I have suggested.

† Tac. de Mor. Germ.

to characterize their descendants in these islands, as much as the swarthy faces and curled hair do those of the Celts.

By a blending, then, of these two races have the great mass of British population been composed. But still we may distinguish these two in a state of extraordinary purity; as the Celtic in the highlands of Scotland and some parts of Ireland, and the Gothic or Saxon on the eastern coast of England.

It is further particularly to be remarked, that around our coasts, and extending some depth inward, are generally to be found tribes corresponding to those of the opposite shores of the continent, as if the districts which they occupy had been the nearest ways of reaching, and the most convenient for settling on, these islands.—In this second point of view, then, we may now consider the British population.

The southern coast of England being most contiguous to France, we have, about the middle of that side, a fair population resembling the Normans of the opposite shores.

In Kent, we have a darker people, like those of



CITIZEN OF THE SOUTHERN PART OF THE EASTERN COAST

Picardie and Artois opposite. We have there also names similar to those of France ; and I have been struck by observing, in Kent, and particularly at Folkstone, the same guttural or sub-lingual pronunciation, which I had previously heard in the provinces above mentioned. All observers who know both coasts must have noted the circumstance, or will at least be struck with the resemblance now that it is pointed out.

In the southern counties on the eastern coast of England, we have again a fairer people who strikingly resemble those of Holland and Friezland opposite to them. Till lately a Dutch fair was annually held at Yarmouth, on the arrival of their men for the fishing season ; and doubtless that has been the road from Holland from time immemorial. — The manly and independent character of the Friezlander accordingly abounds in this district.

[See Plate VI.]

Over a great part of this coast, however, we find much to remind us of the character of the Swedes ; and the frequent terminations of the names of places in *ham*, *by*, &c. seem strongly to indicate

their Swedish original. — With finer features, we accordingly find much Swedish mildness as well as coldness of character, its honesty and absence of cunning, its industry and cleanliness ; and it would not be difficult to discover many parallels to those of Dr. Clarke, who says, that, in the Swedish cottages, the furniture is not only scoured but polished until it shines, and who saw a Swedish female peasant standing with a pail upon the top of the roof of her cottage white washing her chimney.

In the northern counties of the eastern coast of England, constituting anciently the kingdom of Northumberland, we more frequently find the yet fairer complexion and redder hair of the opposite Danes, and, in the more northern part of that country, we hear the guttural *r*, which still distinguishes equally the Danes and our north countrymen, and the infliction of which on the French generally, was probably due to their Norman conquerors. — Here, too, we can match the littleness of the Danish character of which Wolff says “in search of antiquities, I went with the Professor (Thorkelin) to visit a man of *virtu*, and collector of



curiosities. He had formed a singular collection of keys of every description, from that of St. Peter's, down to the most diminutive Venetian padlock."

Nor can we less match Danish obsequiousness so well described at the termination of the seventeenth century by an author who says, that "the clocks in Copenhagen are not allowed to strike the hour before the court clock." — The same traits are remarkable in canny Cumberland.

In Lancashire, I should observe, as well as in Yorkshire, the people are frequently tall, but, at the same time, somewhat awkward.

Nearly the whole of North Wales and part of South Wales, is occupied by a light or blue-eyed people, a circumstance which appears to be owing to a Belgic extraction. This is observable in Anglesea, Caernarvonshire, Merionethshire, and the adjoining districts.

In South Wales, the light eye ceases to be general, and the dark prevails, through a great portion of the counties of Glamorgan and Monmouth, a circumstance which is easily accounted for by the Celtic origin of the people, as suggested by Tacitus,

and confirmed by the structure of their language, though the body of it is as much Gothic and Low Latin as Celtic. — The same may, I believe, be said of the people of Cornwall. — Both of these resemble the Bretons of the opposite coast of France ; and their languages are similar. [See Plate VII.]

The people of the midland counties are a mixture of those we have now described on the surrounding coasts. In general, they are coarse in appearance, both as to form and features.

We may now, in the same manner, examine the population of Scotland.

In the lowlands of Scotland, it is easy to observe a Saxon population, distinguished by its common characteristics of a rounder or squarer face, shorter stature, &c. ; a Swedish, which is taller, with more oval face, and which is widely spread over the country, giving the mildness and gentleness of character which is generally observed among the lowlanders of Scotland ; and a Danish which has all the littleness of that race. These, with Norwegians, appear to have formed the Pictish popu-



JAMES MURKIN — THE PUBLISHER OF THE
NEW YORK HERALD.



SCOTTISH WOMAN OF THE NORTHERN PART OF THE EASTERN

lation of ancient and the lowlanders of modern times. [See Plate VIII.]

In the highlands of Scotland, the same variety of races will be found ; and of these the most remarkable are the Scandinavian or Norwegian tribes of the eastern coast, or that opposite the continental regions whence they spring, and the Celtic of the western coast opposite to Ireland, with the ancient and purer Celtic population of which they were intimately connected. [For the former, see Plate IX. a woman of the north east ; and for the latter, see Plate X.]

Both Pinkerton and Macculloch are of opinion that the Gothic blood predominates among the Magnates, or Duine Wassels, and the Celtic among the common people ; agreeing in this respect with the Gartmore MS., in which it is stated, that “the principal people of the Highlands are of a different race from the commons ; being larger bodied than the inferior sort : they are, in fact, taller and stouter.” “And the writer might equally have added,” Macculloch remarks, “that the fair com-

plexion is generally found among them, and very rarely the Celtic cast.” Both Pinkerton, then, and Macculloch agree in observing, that the higher class still retain that superior rank in society which their Norwegian ancestors assumed when they came into Scotland as conquerors. Sir Walter Scott, moreover, in his poem of Marmion, has noticed this difference; though he has not there attempted to account for it. In describing the Highlanders at Flodden field, he says:—

“ Their leg below the knee was bare;
Their form was sinewy, short, and spare;
And hardened to the blast.
Of taller race the chiefs they own;
And by the eagle’s plumage known.”

The pure Northman, says Macculloch, “is tall and stout, with round limbs, and inclining to be fat when well fed: his complexion is fair, ruddy when young, and his face full; while his eyes are blue, and his hair sandy, or sometimes red. A fine specimen of the Northern descent, offers a striking contrast to the pure descendant of Celtic stock, bred in and in, till he has been reduced to a size and physiognomy not much more respectable than



A. HEGELAND.

that of chimpanzee. Small, slender, and dry, with eyes of jet, and a sallow skin, his cheek-bones are acute, his lips thin, and his expression keen and wild ; the small head being covered with long shining straight locks of coal-black hair. Take the handsomest specimen of these men of Ind ; clap a turban on his head, and a pair of loose cotton trowsers on his heels, and he might pass for some Tartar or Afghan. A woman of the same descent, with a few black rags of ostrich feathers and a silk bonnet, would hardly be distinguished from our purest specimens of gypsies. Yet, in general, the physiognomy is far from disagreeable ; melancholy, yet resolute, and commonly intelligent, whenever, at least, the possessor is engaged in active life. If otherwise, nothing can well look more averse to thinking or action than the face of a dark Highlander, as you may often see him by a dyke side in the rain, or lounging by his crazy and neglected boat on the sea-shore. Though the stature is small, the limbs are well formed, and the muscles marked by power and activity. There are few who can row against a practised Highlander, either for strength

or time. I have often been obliged to keep my boat's crew at the oar for twelve, and even fifteen hours in a heavy sea, without rest or relief. A walking Highlander will perform his fifty or sixty miles in a day ; and when it is done, he will probably be found lounging about among his friends, instead of resting himself, ready to begin again the next day."

" If we meet with power, and with beauty of stature and form, under various aspects, it is always greater as the Norse leaven predominates, or when the hair is not black, and the eyes are blue or fair. In fact, the Gothic race has done for the Highlands just what it has done for England. It is the same in France, where almost all the beauty of the nation is comprised in Normandy." *

In Moray, on the eastern coast, it has been observed, that the people of some part of that country are remarkable for a larger size, and different formation, of the head ; and it is said that the difference of size would be found so great, that a hat, which fitted the head of a Highlander, or an En-

* Vol. iv. pp. 254, 255, 256.



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glishman, would not go on that of a Moray-man of this listrikt. These people are said to be of Lapland origin.

In Argyleshire, on the western coast, it has also been observed, that the people of Lorn in particular are remarkable for a Roman style of countenance ; the nose being high and angular, though the eye is almost universally gray and small.

As to the Irish — those of the north resemble very closely the people of the north of Scotland — like them, in short, they are Northmen ; while those of the south are, more or less purely, Celts. [For the former, see Plate XI ; and for the latter, Plate XII.]

In the south of Ireland, most opposed to the Spanish coast, we find dark hair, generally accompanied by a gray or blueish eye, and sometimes by a high nose, and thin or linear lips.

It is these men, with Arab or Celtic blood in their veins, who have so long struggled with oppression. “ It is usual,” says an anonymous writer, of the Irish, “ to exclaim against the ferocity of the lower orders, and charge as an ineradicable stain on

the national character, the frightful crimes committed in these periodical paroxysms. God forbid we should not feel as deep a horror at those sanguinary deeds, as any other individual in the empire ; but if we wish to understand the real feelings and motives of the Irish peasant, we must always bear in mind, that he considers himself engaged in a war with the law and all its adherents, civil and military, where he is perfectly justified in using every sort of stratagem. All his conduct must be estimated in that light. It is a state of open hostility between two parties, whose business it is to deceive and kill as many as they can. If he shoot a man from behind a fence, it is not an assassination, it is merely an ambush,— if he intercept a proctor, it is a party of the enemy cut off,— if six or seven policemen be killed, it is a brilliant infantry affair,— if a house be burned down, the peasant would think himself more justifiable than Sir G. Cockburn, when, in the last American war, he reduced so many private houses to ruins,— for he perils more than that gallant officer — he is exposed to two chances, the sword and the halter.” Here the



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maze is in some measure, unravelled, the mystery cleared, so far as regards public and political affairs.

CHARACTERS OF THE ENGLISH, SCOTS, AND IRISH.

To judge of the effects of civil, political, or religious institutions, without a knowledge of the character of the people to whom they refer, is impossible.

The differences of character, even in the nations comprising the British empire, are very great. These differences of character are not more remarkable than the accompanying, and apparently corresponding, differences of organization.

Hostile to the mysticism and empiricism of the phrenologists, I am yet, with their more reasoning predecessors in physiology, satisfied, that character and organization are inseparably united. — But of this afterwards.

The manner in which national character is formed, is a subject at once of great curiosity, and of the very highest importance. As I am not aware that any thing has yet been written about it, I shall briefly notice it here.

We know, perhaps, of no existing nation which

is not composed of various tribes ; and these in general differ greatly in origin, organization, character, &c. Yet there is almost always a national character, which is more or less common to the whole, and which, with the progress of time, is perpetually becoming more homogeneous, until war-like invasion, or peaceful colonization introduce new tribes.

The causes of this assimilation are of two kinds, as belonging either to the country, or to its inhabitants. Belonging to the former, are soil, climate, and their productions ; and of these the effects are ultimately the greatest, but their operation is always the slowest. Belonging to the latter, are intermarriages, which operate far more rapidly than soil, &c. though they ultimately yield to these,—and social intercourse, which operates more rapidly and more extensively, but less permanently still.

The more rapid assimilation of the higher classes not only of the same but of different countries from social intercourse, is a striking illustration of the formation of national character.

It is the manner in which this more rapid, more

extensive, though less permanent cause operates, that seems chiefly to have escaped observation. Examples will best illustrate its effects ; and those which the British isles afford are most to our purpose.

In England, the tribes are Saxon, Welsh, &c. ; but the Saxon character predominates. In Scotland, the tribes are Pictish or Northman,* Celtic, &c. ; but the Pictish character, upon the whole, predominates. In Ireland, the tribes are Celtic, Northman &c. ; but the Celtic character predominates. In each case, the predominating character seems to be that of the majority.

ENGLISH CHARACTER.

The Saxons of England exist nearly pure on its eastern coast, are extensively spread over the whole of its surface, and perhaps equal in number all the other races that enter into the composition of English population.

* I have no wish here to insist on, or dispute respecting, the name or origin of the tribe which has mainly formed the lowland population of Scotland : it is enough, for the present view, that a tribe of well-marked character has done so.

The Saxon Englishman (for brevity, I may use only the latter name) is distinguished from other races by a stature rather low, owing chiefly to the neck and limbs being short, by the trunk and vital system being large, and the complexion, irides, and hair light, and by the face being broad, the forehead large, and the upper and back part of the head round and rather small.

In his walk, the Englishman rolls, as it were, on his centre. This is caused by the breadth of the trunk, and the comparative weakness of the limbs. The broader muscles, therefore, of the former, aid progression by a sort of rolling motion, throwing forward first one side and then another. So entirely does this depend on the breadth of the trunk, that even a temporary increase of it produces this effect. Men who become fat, and women who, having borne many children, have the heads of the thigh bones farther separated, always adopt this mode of progression.

The mental faculties of the Englishman are not absolutely of the highest order; but the absence of passion gives them relatively a great increase,

and leaves a mental character equally remarkable for its simplicity and its practical worth.

The most striking of these points in the English character which may be called fundamental, are cool observation, unparalleled single-mindedness, and patient perseverance. This character is remarkably homogeneous.

The cool observation of the Englishman is the foundation of some other subordinate, but yet important, points in his character. One of the most remarkable of these, is that real curiosity, but absence of wonder, which makes the “nil admirari” a maxim of English society. It is greatly associated, also, with that reserve for which the English are not less remarkable.

The single-mindedness of the Englishman is the foundation of that sincerity and bluntness which are perhaps his chief characteristics,—which fit him so well for the business of life, and on which his commercial character depends,—which make him hate (if he can hate any thing) all crookedness of procedure, and which alarm him even at the insincerities and compliances of politeness.

The perseverance of the Englishman is the foundation of that habitude which guides so many of his own actions, and that custom in which he participates with all his neighbours. It is this which makes universal cant, as it has been profanely termed,* not reasoning, the basis of his morals, and precedent, not justice, the basis of his jurisprudence. But it is this also which, when his rights are outraged, produces that grumbling which, when distinctly heard, effectually protects them ; and it is this which creates that public spirit to which, on great emergencies, he rises with all his fellow-countrymen, and in which he persists until its results astonish even the nations around him.

Now, a little reflection will shew, that of the three fundamental qualities I have mentioned, the first seeming may easily be less amiable than the final result shall be useful. — To a stranger of differently constructed mind, the cold observation, in particular, and the slowness and reserve which must accompany it, may seem unsociable ; but

* The word must not here be understood as implying hypocrisy, of which the Saxon temperament is very innocent.

they are inseparable from such a construction of mind, and they indicate, not pride, but that respect for his feelings, which the possessor thinks them entitled to, and which he would not violate in others. The dignity, therefore, which, in this case, the Englishman feels, is not *hauteur*; and he is as rarely insolent to those who are below, as timid to those who are above him.

In regard to mental capacity, it may easily be conceived, that speculative opinions are no favourites in England. They are directly opposed to the genius of the nation, which, as it considers the discovering of precedent as the highest achievement in its jurisprudence, so it regards the discovery of applicable document and authority as the best result of its literary, moral, civil, political, and religious investigation, and which marks its sense of the superior import of documentary and authoritative discovery by the scrupulous conscientiousness with which one author acknowledges his obligations to another, even for so small a matter as a reference to a particular page of an older work.

In regard to perseverance as well as observation,

the relation in which France and England stand to each other is really curious. France is unquestionably the experimenter, and often leads the way ; but unfortunately, she often forgets the experiment, and more frequently still she omits to profit by it. Happily, England adopts, though slowly, the results to which her neighbour's experiments lead ; and thus they are preserved for the adoption of other nations. This difference subsists between all the modes of thinking of the two nations, and affects even their arts and their industry. France, therefore, excels in the chemical arts, where less expected and more brilliant results gratify the genius of her people. England excels in the mechanical arts, where the end is foreseen, and every step toward the close is patiently contemplated.

In regard to the absence of passion from the English mind, it is this which forbids one to be charmed with music, to laugh at comedy, to cry at tragedy, to show any symptom of joy or sorrow in the accidents of real life, — which has no accurate notion of grief or wretchedness, and cannot attach any sort of meaning to the word *ecstacy*, — and

which, for all these reasons, has a perfect perception of whatever is ridiculous. Hence it is, that, in his domestic, his social, and his public relations, it is perhaps less affection than duty that guides the conduct of an Englishman; and, if any one question the moral grandeur which this sentiment may attain, let him call to mind the example of it, which just before the victory of Trafalgar, was given by Nelson, in the simple and sublime communication to his fleet — “England expects every man to do his duty!” Which is the instance that equals this even in the forged records of Roman glory? Happily, too, the excess of hatred is as little known to the Englishman as excess of love; and revenge is abhorrent to his nature. Even in the pugilistic combat, he shakes hands with his antagonist before he begins; he scorns to strike him when he is down; and whether vanquished or victor, he leaves his antagonist neither cast down nor triumphant.*

* Lord Byron's observations on fashionable life in London, will be better appreciated after the preceding analysis—

“ Talking of fashionable life in London, Lord Byron said that there was nothing so vapid and *ennuyeux*. ‘The English,’ said he, ‘were intended by nature to be good, sober-

The extraordinary value of such a character is obvious enough. British liberty and British com-

minded people; and those who live in the country are really admirable. I saw a good deal of English country life, and it is the only favourable impression that remains of our mode of living; but of London, and exclusive society, I retain a fearful recollection. Dissipation has need of wit, talent, and gaiety to prevent reflection, and make the eternal round of frivolous amusements pass; and of these,' continued Byron, 'there was a terrible lack in the society in which I mixed. The minds of the English are formed of sterner stuff. You may make an Englishwoman (indeed Nature does this) the best daughter, wife, and mother in the world; nay you may make her a heroine; but nothing can make her a genuine woman of fashion! And this latter *rôle* is the one which *par préférence*, she always wishes to act. Thorough-bred English gentlewomen,' said Byron, 'are the most distinguished and lady-like creatures imaginable. Natural, mild, and dignified, they are formed to be placed at the heads of our patrician establishments; but when they quit their congenial spheres to enact the leaders of fashion, *les dames à la mode*, they bungle sadly. Their gaiety degenerates into levity — their hauteur into incivility — their fashionable ease and nonchalance into *brusquerie* — and their attempts at assuming *les usages du monde* into a positive outrage on all the *bienséances*. In short, they offer a coarse caricature of the airy flightiness and capricious but amusing *légèreté* of the French, without any of their redeeming *esprièglerie* and *politesse*. And all this because they will perform parts in the comedy of life for which nature has not formed them, neglecting their own dignified characters.'"

merce are its results : neither the Scottish nor Irish mind would so easily have attained them.

I have said, however, that the intellectual faculties of the Englishman are not absolutely of the highest order ; and this is owing to his want of higher reasoning powers, as well as of passion. Happily, indeed, with the want of these reasoning powers, the passions also are wanting ; for had the latter existed without the former, the English character would have been utterly marred. — This will throw some light on what we have next to say.

Every intermarriage or cross, or every new accession of character, however acquired, is not an advantage. — This being premised, let us consider those which take place by the blending of the Saxon English with the surrounding tribes.

Here, I should remind the reader of having already shown, that, independent of the descendants of the various invading tribes, still easily discernible, the coasts of England and Scotland present masses of population of greater or less depth, regularly corresponding to the population of the shores of the Continent which are respectively opposite to them.

It is but few of these, however, that need again be noticed here.

In the west, the Saxon English are blended with the Welsh ; but there is here no gain, because the Welsh cross can add passion chiefly, without higher reasoning powers. The Welsh, in fact, are already a compound of Celt, Saxon, &c., as both physiognomy and language prove ; and in them the imagination, or the passion of the former, and the perseverance of the latter, combine to produce that dull mysticism, or that dark and smouldering anger, which sometimes elicits such frightful consequences.

In the south, the Saxon English are blended with the French, as is evinced by the dark complexion which marks our Kentish and southern population ; and, in that population, we sometimes witness something of French sharpness added to Saxon firmness, and no increase of amiability of character.

In the north, the Saxon English are blended with the Picts or Northmen of Scotland, as the taller and sparer form of the Yorkshire, Lancashire, and northern population in general shews ; and the ad-

ditional reasoning powers thence obtained, are evinced in the ingenious industry of the northern towns of Manchester, Sheffield, Leeds, &c.*

Thus, in England, there is a great deficiency of any advantageous cross — there is scarcely any thing to improve the Saxon race ; but, to compensate for this, that race has such sterling fundamental qualities, and it so easily receives much improvement from the slight intermixture with the remoter Pictish, Scandinavian, or Danish races, that it greatly excels its original type, which may still be seen in Friezland and elsewhere on the opposite coast ; and it is, at the same time, so extensively diffused over the country, that, in its character, the other English races are entirely swallowed up.

Now, may the mode in which the Saxon character dominates over that of the other English races be more easily understood,— whether these races form a permanent portion of English population, or consist of the scarcely less numerous intruders from Scotland and Ireland.

* The Danish, Norman, and other races, require no particular notice as to character, in a sketch like this.

How mad the dull mysticism — how atrocious the gloomy passion — of Wales must seem amid the lucid common-sense and unimpassioned judgment of England, may be easily conceived. How abashed their possessors must feel, when surrounded by a more numerous race, not more distinguished from them by plain sense, and candid impartiality, than by civilization and opulence, is equally obvious.

Equally obvious is it how mean the prying enquiry, how reptile-like the bending obsequiousness of Scotland, — how malignant her party-spirit, even in the sanctuaries of science, how satanical her consequent persecution, — how like fraud her crooked ratiocination, how like stolen goods the wealth accumulated by such unholy means, — must seem in merry England ; while the very intellect of her natives must make them shrink before the calm eye of the honest, sturdy, and uncompromising Englishman.

Not less obvious is it how utterly worthless and contemptible must seem Irish want of judgment, want of principle and want of industry, and how well-deserved Irish wretchedness ; — though it is to

be feared that the natural effect of this inevitable contempt is less salutary than, for the sake of Ireland, one would wish it to be.

Thus, however, must in England all characters ultimately merge in the Saxon.

SCOTTISH CHARACTER.

The Scottish character cannot be treated as I have treated the English. In Scotland, no tribe predominates so greatly as the Saxon does in England. The Celt of the Highlands predominates as completely within his circle, as the Pict or Northman in the Lowlands ; and the national character is fast forming by the union of both. They must, therefore, be considered separately.*

The Picts, or Northmen, of the Lowlands, exist nearly pure on their eastern coast, and, I believe, considerably exceed in number the rest of the Lowland population.

* There are in Scotland, as already shewn, other tribes, as the Saxon in the Lowlands, and various others along the eastern and northern coasts : but they are unimportant to our present view.

The Lowlander is distinguished generally by a tall stature, and a rather sinewy frame, by complexion, irides, and hair rather light, and by the face being long, and the upper part of the head equally so in the horizontal direction.

In his walk, the Lowlander, being long-limbed, steps well out, having neither the lateral roll of the Englishman, nor the spring of the Highlander, but advancing directly, steadily, and firmly.

The mental faculties of the Lowlander are of a very high order; being sensibility, discrimination, prudence, &c.

The sensibility of the Lowlander is the foundation of some of his best and worst qualities — his benevolence, as well as his pride and revenge.

The benevolence of the Lowlander, however, is too much under the controul of prudence to be evidenced by acts that cost him aught pecuniarily; but he will frequently sacrifice what cost him much more — his time, his exertions, and his interest, to the utmost extent of his ability. Many subordinate points in his character indicate the general exercise of this sentiment; as even the tone or chant

of his language, which is in this respect remarkably distinguished from the briefer and gruffer tone of the Englishman, and the more gay and careless one of the Irishman ; * so is it indicated by the soft and plaintive melody of his music, which, owing to the frequently vulgar and always ill adapted words of Burns, is unappreciated in England : more palpably still is it indicated by that pliability and suavity of manners, by which he is distinguished from the English, and more nearly resembles the Irish. — To the irritability, pride, and revenge, which spring from the same source, I have already alluded.

The discriminating power of the Lowlander are equally evidenced by his success in abstract and philosophical enquiry, and by his shrewdness in

* The tone or chant, is vulgarly denominated brogue. Wherever there are various tribes in a nation, each is distinguished by this. The brogue of England is as distinguishable as that of Ireland ; and it is far less musical than either it or the Scottish. The Scottish chant consists of many inflections, but falls upon the whole, and may be represented by a falling curve ; the Irish, with as many inflections, by a rising curve ; and the English, by a series of equal and shorter curves.

the affairs of common life. In the former of these respects, Scotland — a nation of two millions and a half — stands at least as high as England, a nation of fourteen, or France, a nation of thirty; and in regard to that education which enhances the reasoning powers of the rising race, Scotland takes precedence of every other nation. — Unfortunately, in Scotland, pride and want of candour too often degrade knowledge into sophistry; and the shrewdness of common life is apt to degenerate into mean prying for the promotion of interest.

The prudence of the Lowlander is proverbial — perhaps excessive. On one hand, it gives rise to that of love of accumulation in which the means is often mistaken for the end, that fear to do a good action lest some ill should come of it which is so absurd and contemptible, that narrow-minded suspicion which is a greater curse to the suspector than the suspected, and that deference to fortune and interest which is so base and disgraceful; and, on the other hand, joined to the preceding qualities, it is the foundation of that industry, economy, and free-

dom from crime, by which Scotland is distinguished from England as well as Ireland. *

* We could not, says Mr. Warner, quit this boundary of Caledonia, little as we had seen of the country, without casting ‘one longing ling’ring look behind,’ not so much on account of the beautiful scenery with which we had of late been so agreeably amused, as on that of the character of its inhabitants, whose manners, as far as our opportunity of observing them extended, had interested us extremely. Tainted, perhaps (though I am almost unwilling to suppose it), with some of those prejudices which the illiberality of my own countrymen have so generally excited against the Scottish character (and which, I am inclined to think, arises rather from our envy at their mental superiority, than from any conviction of their comparative moral or intellectual defects), I was greatly but agreeably surprised to find nothing but what was amiable and exemplary in every class of Scotch society. Hospitality, kindness, and most minute attention to the comfort and ease of their guests, mark the character of the Scotch gentlemen; whilst the peasantry are equally remarkable for the same good qualities in a ruder way, and the more valuable ones of correct morality, sincere piety, and an exemplary decency in language and manners. Struggling with poverty which almost amounts to a privation of food, and condemned to a labour before which the southern Britons would sink down in listless despondence, the Scotch peasant displays a degree of patience and industry, accompanied at the same time with content, that place him on the scale of moral excellence far above those who ridicule or despise him. Serious without moroseness; quick, without asperity; and sagacious without

Thus, the best characteristic of the Lowlanders (and it is difficult to conceive a better) is their extraordinary discriminating power; their greatest defect is in imagination and passion.

Happily, most happily, these are supplied by the Celts of the Highlands, with whom the Lowlanders are rapidly blending in intermarriages of which the cross could scarcely have been more scientifically chosen, and which are producing a race of the highest intellectual organization.

The Celts must now be briefly considered, in order to compare these with the Lowlanders, and both with the Saxon English and other tribes, and to understand the manner in which their united character dominates over these.

The Celts of the Highlands exist in greatest purity in their western parts, and equal perhaps in number the rest of the Highland population, on which consequently they have generally bestowed their manners, their language, and their dress.

conceit; friendly, kind, and just; this may be considered as the moral portrait of such part of the Scotch as are not sophisticated or spoiled by a communication with their southern neighbours."

These Highlanders are of middle size, well formed and active, of brown complexion, grey irides, and dark hair, and of rather broad face, rather low but well-marked forehead, and head long in the horizontal direction.

In his walk, the Highlander, owing to the strength of his limbs, advances with somewhat of a springy motion, which is easily distinguished.

The mental faculties of the Highlander are also of a high order, being sensibility, imagination, passion — the latter two being precisely those in which the Lowlander is deficient. This intellectual character, though directly opposed to that of the Englishman, is scarcely less homogeneous and simple. — The character of the Lowlander stands, in some measure, between the two ; conforming in this respect with his geographical position.

The sensibility of the Highlander is the foundation of that extreme irritability by which he is distinguished, and in a great measure also of that sentiment which is so remarkable, not merely in his language, his poetry, and his music, but as the basis of most of his actions in life.

The imagination of the Highlander creates his poetry — that high imagining which his Highland mother gave to Byron, and which has now for ever blotted out nearly all the dull formalities of English poetry, — that genius too, equally high and wild, which wastes itself in the northern magazine, and which every month shows how unnecessary is the dull measure and the silly tag of verse. It creates also that spirit of adventure which carries the Highlander over every region of the earth.

The passion of the Highlander is equally evidenced in the devotedness of attachment and the fury of war, — the invincibles of France beaten on the sands of Egypt, the ramparts of Spain scaled as if these were their native rocks, equally innocent of foes and fire, the line of Waterloo broken to the shout of “Scotland for ever!” — But all Europe has witnessed their daring, and their enemies have paid them the tribute of admiration. It is unnecessary to say, that urbanity, warm-heartedness, and hospitality, strongly characterize the Scottish Highlander.

It must now be obvious why I have said, that

no intermarriage or cross could have been more scientifically chosen than between the discrimination and *prudence* of the Northman, and the imagination and *passion* of the Celt, and how inevitably this is producing in Scotland a race of the very highest mental organization — a nation which, as Scott observes, is “ proverbially *patient* of labour and *prodigal* of life.”

Thus, also, is understood, not merely the relation between these two characters — each needing the other's aid, and neither entirely dominating, but why unitedly they triumph over every other tribe, and very easily over the Saxon, as a moment's comparison will show.

Amid such a population, the broad, round, and ruddy face of the Englishman is discerned even by children in the streets, as is the large trunk of the body, the deeper tone of voice arising from the extent of the vital cavities, the roll upon the centre of the stomach rather than of the head, the look of satisfaction with the state of the former rather than of the latter, the absence of every trace of deep thought, &c. All these qualities, so opposite to

those of the Scottish, enable their vulgar to hail the Englishman with as unerring a certainty, and as satisfied a superiority, as constitutes a return for the dislike, and even fear, with which they are sometimes received in England.

Amid the more active Scottish qualities, the shallow reasoning, or the want of reasoning, of the Englishman, would be despised, and his cold, unimaginative, and unimpassioned character would be scorned ; while the absence of all dash or spirit in his conversation, even when literary,—his choice of words, and their loud, confident, and emphatical pronunciation, to express nothing,—his fear to say any thing at all uncommon, or that had not been said before,—and his resource in strong, formal, slow, and serious declarations of some matter of fact, as “ the — very extraordinary — satisfaction — which he received from the — most — uncommon — excellence — and really — admirable — style — of a dinner — at Lord — — —'s, where he had the honour of meeting,” &c. &c.; or, if he be above this, in equally strong, formal, slow, and serious accounts of the qualities of a particular wine, the intermarriages of

particular families, the amount of the fortune of each of their members, and such-like wretched trash --- the “ *ne plus ultra* ” of observation and weak-mindedness ; — all these, despised, scorned, neglected, would in Scotland finally compel the English to merge in the Scottish character.*

How fortunate, however, the blending of this compound Scottish with the simpler Saxon charac-

* Lest this representation should be deemed inaccurate, an unquestionable illustration may be taken from a truly English writer, Dr. Johnson, “ many of whose Ramblers,” as Scott observes, “ are little better than a sort of pageant, where trite and obvious maxims are made to swagger in lofty and majestic language, and get some credit because they are not easily understood.” Boswell tells us, that he (Johnson) gave Sir Joshua Reynolds the following account of its (the Rambler’s) getting its name : “ What must be done, Sir, will be done. When I was to begin publishing that paper, I was at a loss how to name it. I sat down at night upon my bedside, and resolved that I would not go to sleep till I had fixed its title. The Rambler seemed the best that occurred, and I took it.” This presents the usual number of words about a matter of no general, and of very small personal interest. Its amount is, that “ he called it the Rambler, because it was the best title that occurred to him within the limited time which he was pleased to allow himself for the decision of this point : ” — in other words, he called it the Rambler, because it pleased him to call it the Rambler.

ter, cannot for a moment be questioned. The more capacious forehead and calmer observation of the latter, become combined with the higher reasoning, imaginative, and impassioned powers of the former. This is often exemplified in the Scottish cross with the Lowland Scottish Saxon ; and that union of observation with some of the higher faculties which distinguished Sir Walter Scott, is a striking example of its benefits.

IRISH CHARACTER.

Of the Irish character, the great basis has been already described in the Celt of Ireland — being, in organization, mind, language, &c., only a little less pure than he of the Highlands. They are similarly distinguished by sensibility, imagination, and passion ; and repetition on this subject is unnecessary.

Unfortunately, the domination of the original Celt over Irish character is modified chiefly by that of the subsequent Milesian, whose large and dark eye, high and sharp nose, thin lips, and linear mouth, declare his southern origin more surely than Irish history or Irish fable.

Consistently with this organization, the Milesian adds the vivacity and wit, the love of splendour and want of taste, the voluptuousness and licence of the south, to the sensibility, imagination, and passion of the aboriginal population of Ireland. Owing to this and illustrating it, Celtic music, which, in the Highlands of Scotland, is wild, grand, and melancholy, has become, in Ireland, more gay and voluptuous.

It is scarcely possible, however, to conceive a cross capable of conferring so little benefit on either, as that of the original Celt and Milesian.

The intellectual organization of the Irish people has thus more resemblance to that of the south, than to that of the north of Europe. It confers imagination and passion in a far higher degree than reasoning and judgment.

With such intellectual organization, it is easy to foresee the kind of moral character which must mark the nation. Such a people must naturally be much less distinguished in the discrimination of good and ill, and the calm and patient discharge of duty, than in the love of friends and the hatred of

foes, or in the devotion even unto death, to any cause which they may espouse.

Now, to the guidance of a people possessing such capabilities, it is obvious that knowledge is peculiarly necessary. With principles of high activity, there must be knowledge to direct.

Unfortunately, however, these very capabilities, and that high activity, are at variance with patient investigation and the means of knowledge. Such qualities, indeed, act as it were by intuition, and no more brook delay than the electric spark in its passage through the air. The results must as necessarily be brilliant and striking in the moral act as in the physical illustration ; but they may indifferently be good or ill ; they may rouse the torpid current of life and pleasure, or they may wither and destroy.

Among such a people, it is evident, that when, owing to Saxon and Scandinavian intermarriages, calmer observation and reasoning powers are added to those high capabilities, so essential to all genius, the result must be such characters as Ireland has occasionally produced. It is not less evident,

however, that such characters will be comparatively rare, and that the mass of the people will too often add fierce barbarity and superstitious bigotry to the grossest ignorance.

In Ireland, accordingly, when the people are excited by private or public hatreds (for this is as often independent as dependent on religious and political differences) crimes at once the most brutal and the most cowardly are perpetrated, without the slightest compunction ; robberies, burnings, tortures, and assassinations, are the commonest means of vengeance ; and I am warranted in saying, that, no where in Europe, may be seen such a complication of ferocity and crime.

To sum up this view of English, Scottish, and Irish character, I may observe that sincerity and independence distinguish the English ; intelligence and sagacity, the Scottish ; and a gay and gallant spirit, the Irish. The best qualities, however, are apt to associate with bad ones. The independence of the English sometimes degenerates into coarseness and brutality ; the sagacity of the Scottish,

into cunning and time-serving ; and the gaiety of the Irish, into fickleness and faithlessness. Could we combine the independence of the English, with the sagacity of the Scottish, and with the gallantry of the Irish, we should form almost a God. Could we, on the contrary, unite the brutality of the first, with the cunning of the second, and with the faithlessness of the third, we should form a demon.

SECTION II.—*The French.*

In France, I observe various forms of face,—the Celtic, now so often mentioned, which seems to be the most universal,—the Frank, which is still most abundant on the German side of France, and which combines the cold features of the German with the sharpness of the Gaul, forming a round, compressed, and hard physiognomy,—and the Gallo-Spanish or Gallo-Italian of the south, which unites the warm features of the transmontane people with the quickness of the purer Celt.—The influence of the long and narrow Celtic head and the intensity of its functions will be found generally illustrated in the following

CHARACTER OF THE FRENCH.

The intellectual organization and character of the French, is one of the simplest and most homogeneous in Europe. Quick sensibility, superficial observation, clever thinking, and vivid passion, at once agree, and easily account for, whatever we observe in the character of this people.

From quick sensibility, more or less excited by passion, should spring love of novelty and of variety. Certain it is, that Cæsar could not have more accurately characterised the French of the present day, than by the “*cupidi novarum rerum*” which he applied to their ancestors. It is not necessary either to vindicate or to illustrate the justice of this fundamental characteristic; it is acknowledged by the French themselves.

The rapid pursuit of novelty and of variety must as inevitably produce levity, inconstancy, and fickleness; and these circumstances are so well known in the character of the French, as not to admit of dispute.

By such elements, moreover, it is obvious, that

the more advanced intellectual processes must be proportionally affected. Hence, observation should be superficial, careless, and irregular. Hence, reasoning should be clever, shallow and inconsistent.

It is, in fact, owing to this, that, though the French display very extensively respect for science and ardour in its pursuit, French works are in general less to be trusted to than English and German ones ; while, at the same time, owing to another faculty of French mind, they set out with, and maintain, incomparably higher pretensions, — and that, with such plausibility, that the reader goes eagerly on in expectation of great things,—and it is not till he has closed the volume, that he begins to find out, first, that the work does not contain quite so much as he expected, and, next, that it would be difficult to say what precise addition he has made to his knowledge by reading it!

It is equally owing to this, that, in the arts, while French productions display resource, ingenuity, and dexterity, they, at the same time, shew a striking want of the sense of fitness, and are unfinished and flimsy. Such, in the cities of France, is remark-

ably the case with whatever regards furniture and decoration, while the productions of cookery are at once impregnated with filth, and admirably calculated to conceal it. In the country, again, with a climate superior to that of England, there is every where to be seen open fields, later harvests, corn full of weeds, and inferior grain.

I have said, that, with this quick sensibility and clever thinking, the passions are vivid; and this leads to the portion of French character which, if not the most important, is at least the most striking.

It is evident, that, under these circumstances, the gratifications of the passions will be as numerous as quick sensibility, and as ingenious as clever thinking, can procure them. All of them, however, may be reduced to the following heads—the gratifications that are inherent in this temperament itself, and those which it can derive from external sympathy and approbation — from vanity.

As to the first of these gratifications, the French derive from their own temperament the most amiable cheerfulness and gaiety, as well as love of amuse-

ment; and it is under this category, that should be noticed that taste which they every where and so honourably shew for the elegances of sculpture and painting.

It is chiefly from this gaiety and the cleverness already alluded to, that spring the wit and light satire of the French, which place the works of the admirable Voltaire, Le Sage, &c. above all rivalry, and which have done quite as much as the homilies of other nations to enlighten and polish society, and far more to emancipate it from religious and political slavery.

The gratification derived from vanity is the most conspicuous of all French indulgences. In such a temperament as the French, this involves also many corresponding consequences.

Vanity thus implies the consciousness of being observed, and it requires display and noise, theatrical confidence and pretension. Accordingly, no class of Frenchmen are exempt from these.

To take the lowest class.—Who has not, even on entering France, seen one driver of the diligence draw up his naked, dirty, and perhaps wet limbs,

from the monstrous jack boots of the establishment, that another might introduce his in similar condition, while both, however, wore an embroidered jacket and an artificial queue, and had perhaps a pocketful of flour to strew over his head before entering a village, where the incessant cric-crac of his whip was sure to call out the rustic damsels?

To take a higher class.—Who has ever observed two Frenchmen talk for a moment, even in the public streets, of whom each did not theatrically adjust himself so as to appear to the utmost advantage to every eye that could overlook him? This theatrical adjustment accompanies a Frenchman through life; and I verily believe, that no Frenchman, even at the foot of the gallows, or with the rope round his neck, ever forgot the previous adjustment of his toes, accompanied by a “*soupir pour son amie*,” or “*pour sa patrie*.”

Most English and Scottish gentlemen (I speak not of the Irish, as they have a taste for female ugliness)—most English gentlemen, who are above being taken by superficial pretension, are aware of the *almost universal* ugliness of Frenchwomen—

the hard, sharp, and wrinkled face, the greenish dark complexion, the hair on the upper lip, the hoarse voice, the almost bestial expansion of the lower ribs to contain enormous viscera. Now, the combination of this with extreme vanity, elicits the most curious consequences. Instead of moderating affectation, it only inspires a *desperate* ingenuity in the invention of new fashions ; for, of these, this strange combination of circumstances is the real origin.*

Even the mode of walking in France, has more than one relation to vanity — not merely because the rise on the toes, the writhing of the figure, and the paralytic shake of every member, are inspired by that sentiment, but because being, from a curious and accidental circumstance, the very worst mode of walking, it is vainly vaunted as the most

* The difference between French and English taste in dress, is very remarkable. Even when English women take a hint from French contrivances, they endeavour to be more natural, modest, and classical. As to male dress, an English gentleman always desires his tailor to avoid the extremes of fashion ; and, as his dress is grave and manly, it is generally followed throughout Europe.

graceful ; while the women of France reprobate the natural walk of those of England as masculine or military, because in progression the foot is thrown directly forward, instead of being curiously drawn upward, &c. &c. This being a point of some interest to ladies, I beg to illustrate it at some length.

Having been acquainted with an old French gentleman in England, and being afterwards on a visit to Paris, I one day thought I saw him approaching the hotel where I happened to reside. A certain gait and air, which I had not hitherto analyzed, convinced me I was right ; and I expressed my satisfaction on this account to the friend who was beside me at the time, and who similarly recognised and expected him. We were disappointed, however, as he did not call. This disappointment occurred again and again, until we began to suspect, and at last actually discovered, that there were several old gentlemen in Paris who had a similar gait and air.

This struck me as odd enough ; but still no reason for it occurred to me. Going, however, one

day to a considerable distance through the streets of Paris, to see some troops arriving from Spain, and walking, as the British generally walk, without much regard to the inequalities of the pavement, I found, on my return, that I was unaccountably fatigued. A little reflection led me to the cause of this, in the extraordinary irregularity of the Parisian pavement ; for the stones being large, worn away on every side and prominent in the middle, every step I had taken, falling sometimes high and sometimes low, had shaken me in such a way, that, though I did not much observe it at the time, its effects were very perceptible.

I now began to imagine, that all this might have something to do with the peculiar walk and air of my old friend ; and, on looking more closely, I thought I could see that almost all old gentlemen, as well as old ladies, and even many young ones, had some degree of the very same peculiarity. This I now suspected to result from some contrivance on their part to obviate the inconveniences arising from the irregularity of the pavement.

Observing, now, with additional care, I at once

found my suspicion completely verified, and was able to detect the contrivance employed.

This commences by picking the steps. In order to do this in the best manner, it is necessary to pick only with one foot, that is, to advance always the same foot, and let the other follow it up. If one attempt, on the contrary, to pick with both feet, it causes a considerable rotating of the body, which, in a long walk so performed, becomes fatiguing. The Parisians accordingly pick with the stronger — the right foot.

A little reflection will shew, that, in thus picking with one foot, they must not only turn the right toe proportionally in, but must turn the whole of the right side proportionally forward, and in some measure advance laterally.

Even this, however, is not enough : as the hollows between the projecting centres of the stones are considerable, and as these are generally filled with mud, it is necessary to avoid bespattering oneself. This, the Parisians effect by holding the knee and ankle joints slightly bent, but rather stiff, while they spring, slightly sideways, from one stone to another.

Nothing can be more amusing than this mode of progression, when one is once prepared to observe it. The reader may easily figure to himself a party setting out in this way,— all having the right leg advancing, the right toe turned in, and the right side turned forward,— all having the knee and ankle joints slightly bent, but rather stiff, and in a sort of springy state,— and all advancing in some measure, sideways,— but, owing to the different length of limb, some seeming to hop, and others to hobble along. It is really a good deal like the walking of birds.

The effect of this habitual mode of progression is such, that, in old persons, the whole body seems irremediably twisted, and the stiffer woollen clothes of the man evidently partake of this twist; the right side of the neck of the coat is brought quite in front, and even the hat has always corresponding, but curious and indescribable curves. So irretrievably is every thing impressed with this twist, that one would almost imagine that the clothes, if detached from the owner, would by some sort of instinct stand in the owner's attitude.

This, then, is the Parisian mode of walking, which is so highly vaunted by the French, which French vanity has converted into an exquisite accomplishment, and which all who have not had the *felicity* of being born in Paris, may *despair* of even imitating !

French dancing is equally connected with vanity. It has the mere merit of clever execution, and stands in the same relation to some Neapolitan and Andalusian dancing, that German arithmetical harmony does to graceful Italian melody. French dancing, in short, is destitute of feeling and expression. You perpetually discover in it the lateral twist and the sideway hop of their street-walking, accompanied only with a languishing bend of the neck in the opposite direction, and an affected elevation and flexure of the arm,— and these, like all other attitudes, stiffly and invariably reproduced in precisely the same parts of the figure, till at last you can infallibly predict their assumption, and are disgusted by their formality and sameness. In every thing, indeed, French elegance and grace are full of mannerism.

All these, however, are the most innocent effects of vanity, which cannot be thus always gratified without interfering with the convenience, the pleasure, or the tastes of others. Vanity sometimes requires familiarity; and, while blunting the sense of propriety, it produces boasting, impertinence, indecency.

This, joined to preceding causes, induces the sacrifice of every thing for exhibition, and gives a character of contradictiveness to the exhibition itself. Hence, in every case, the mixture of dirt and meanness with expense and splendour.

Hence, the French have no idea of retirement. Hence, their bedrooms are made to receive company. Hence, on ordinary occasions, the lady will dress behind the curtain of the bed, while a gentleman sitting in the room can easily tell every thing she is performing; and hence, while the day of fête exhibits the walls festooned with roses, and a drapery of silk or lace thrown over the beds, the clumsy deal table may make a ludicrous contrast with the former, and the discoloured bed-linen a disgusting one with the latter.

To this cause, must also be ascribed the number of restaurateurs, cafés, literary societies, institutes, libraries, and museums in the capital of France, as well as the splendour of their establishments, and the dirty passages and scenes you must often encounter to enter them. Hence too, even in their finest theatres, the passages to the boxes present dirty and cracked pavements of brick, and their doors are opened by a few such old women as may be seen gathering stones or weeds from a field in England.

Who, in fine, is ignorant that this vanity, if it can but gain a decoration or trifling favour, easily bribes one fourth of the population of France to be spies over the rest, so that the porters of every house, and almost every servant in it, are in the pay of the police? M. Benjamin Constant, indeed, informed the writer, that every servant in his house was in that pay; and that he happened then to have learned the sum his coachman received, but that he should not change him, as he might get a worse, and had little chance of getting a better.

Vanity, in fact, is forgot in France only when the natural voracity of the people predominates

The dinner scene is one of absolute horror; and nothing is, perhaps, more ridiculous than that, while Frenchmen are astonished at the cleanliness and elegance with which Englishmen eat, a recent writer should have affected to instruct his countrymen to imitate the utter confusion, the awkwardness, and the dirtiness of a French dinner.*

* The French use of forks, napkins, &c. really requires some notice. A French gentleman, in adjusting himself at his deal table and shabby cloth, does not hesitate to fix a napkin about his neck, in such a manner as to protect his clothes in front against the certainty of being bespattered by his mode of eating. An Englishman of the middle class would be ashamed of such a contrivance: for without any particular care, he eats so as not even to stain the damask cloth with which his mahogany table is covered. The French gentleman is perpetually wiping his dirty fingers on a napkin spread out before him, of which the beauties are not invisible to his neighbours on each side. The Englishman of the middle class requires no napkin, because his fingers are never soiled. The French gentleman, incapable of raising his left hand properly to his mouth, first hastily hacks his meat into fragments, then throws down his dirty knife on the cloth, and seizing the fork in his right hand, while his left fixes a mass of bread on his plate, runs up each fragment against it, and having eaten these, wipes up his plate with the bread, and swallows it. An English peasant would blush at such bestiality. A French gentleman not only washes his filthy hands at table, but, after gulping a mouthful, and using it as a

It is not, however, on this occasion only, that French dirtiness is remarkable. As to egesta as well as ingesta, they seem, both in speech and practice, to cultivate a familiarity with nastiness. A Frenchwoman will unscrupulously describe the state of her secretions and excretions, in such a way as to make an Englishman blush, or to shock and disgust him.

But I have done with the subject of vanity. Reflection will show, that this sentiment cannot procure its gratification, without granting something in return. It is politeness, accordingly, which in France, is the price paid for this indulgence. It,

gargle, squirts it into the basin standing before him and the company, who may see the charybdis or maelstrom he has made in it, and the floating filth he has discharged, and which is now whirling in its vortex. In England, this practice is unknown, except to those whose tastes and stomachs are too strong for offence. It has been stupidly borrowed from the Oriental nations, who use no knives and forks, and where, though it has this apology, it has always excited the disgust of enlightened travellers. When dinner is over, the Englishman's carpet is as clean as before: the Frenchman's bare boards resemble those of a hog-stye. In short, in all that regards the table, the French are some centuries behind the English.

thus, happily produces some good effects. The lower classes in France are, in consequence, surprisingly polished and conversable; and the dirty carter, or the ragged porter, if a barrow-woman or basket-woman stand in his way, permitting no haste to derange the most scrupulous punctilio, will lift his cocked hat, and solicit the honour of being permitted to pass.

By some, it has been said, that the politeness of the French is carried at times ‘to excess;’ while others contend, that it is far better this should be the case, than that there should exist the brutal behaviour which is often exhibited by the lowest classes in England. I should be inclined less scrupulously to agree with the latter, but for the following considerations.

The forms of politeness are intended as the signs of respectful and benevolent feeling. It is evidently worse that the sign should exist without the feeling, than the feeling without the sign. Real politeness, indeed, may be said to consist in doing that which forms profess. Now, in this respect, the English are indisputably superior: they do

more, and say less. In France, on the contrary, saying is a substitute for doing ; and doing is unnecessary. There is, there, an eternal divorce between external signs and internal feelings. Assuredly, there can be no state of manners less favourable to candour and generosity.

The same observations apply to the perpetual affectation of sentiment in France, where its reality has the slenderest possible existence.

So much for politeness as the price paid for the indulgence of vanity among men generally considered. — A similar arrangement, or tariff, is entered into between the sexes. I fear I must consider their mutual indulgence in France chiefly in this light ; for, however women may be the objects of gallantry in that country, the confidence is not more remarkable than the carelessness with which they are treated in the most essential particulars.

As to food, women in England live in all respects as well as men, and the indulgence of their taste is an object of much consideration. In France, on the contrary, the husband daily walks to the restaurateur's, and regales himself as well as he

can ; but if meanwhile you enter his house, you may probably find his wife and children dining on a little soup made of lard and vegetables, or a few cakes toasted on the stove, and a glass of sour wine mixed with water. The house indeed contains few articles fit either for cooking or presenting a dinner. As a reward, however, for the wife's domestic duties, she is perhaps indulged with a dinner at the restaurateur's on a Sunday.

As to clothing, women in England are generally better dressed than men ; and one is perpetually struck by observing, even among the lowest class, very common-looking men accompanied by good-looking, cleanly, and well-dressed women. In France, on the contrary, one is often surprised to see gentlemen walking arm in arm with women whom, from their sombre, but in colour strongly contrasted, and therefore dirt-concealing, woollen dresses, one takes to be their servants. As a reward also for this sort of privation, the wife is indulged with a gauze dress covered with tinsel, such as our itinerant actresses display at a fair, with which she occasionally appears at an evening

party. In England, the *identity* of a woman of any rank may at all hours be discovered by her external appearance. In France, this is scarcely possible : she passes from the dinginess and dirtiness of a *grub* during the day, not through any *intermediate state*, but at once, to the glitter and glare of a *butterfly* at night.

Notwithstanding all this, the liberty of French-women is highly favourable to virtue. There is, in France, none of that cunning cant of male morality, the falsehood and impertinence of which are perpetual bribes to the outwitting of it. There is, there, none of that base scandal which is thus brought into being by men, and which every woman is ready to pour out upon each, in all its bitterness and malignity. There, the attentions of gallantry necessarily occupy the time, and consequently take the place of licentious indulgence. There, the relation of the sexes is as free as the most enlightened and the most generous could wish.

I make this declaration in face of vulgar English prejudice, not only because justice demands

it, but because it is a proof, that, however severe some of the preceding strictures, they are founded on the long-continued observation, and the entire conviction, of the writer.

In England, on the contrary, the condition of women is most unfavourable to virtue. Enlightened travellers universally agree, that the brevity, the coarseness, and the success of love-making, is everywhere in proportion to the restraints imposed upon it: it is shorter in England than in France; and rather shorter in Turkey than in England. In the former, bolts and black eunuchs,—and in the latter, male cant and female scandal,—are thus perpetual excitements to vice.—Nothing, indeed, but — the innate virtue of English women could resist them.

There was a time when English women laughed at the old Spanish duenna. Is it not barely possible, that Spanish women may now laugh at the stout young fellow, armed with a cane, who walks after every English woman of fashion? This is so pompous an appendage, that the innocents have all in succession found it quite indispensable; and

some of them, it is now said, reluctantly occupy the prison of which they have suffered or sought the erection. I verily believe, that an English Boccaccio might make as much of the devices of our modern dames to get rid of their armed attendant, his mounting guard at one door of Waterloo or Trafalgar House, while the lady has retired by another — to take him up, however, in returning an hour or two afterwards, &c. &c. as ever that great Italian did in regard to the descendants of the Lucretias and Virginias. — But as we said before, the — innate virtue of English women will always afford sufficient assurance of their innocence.

One final trait of French character we have yet to notice : it is the necessary consequence of some which precede. — I have said, that, in France, the gratifications of the passions are as numerous as quick sensibility, and as ingenious as clever thinking, can procure. But, if the love of pleasure be excessive, the desire of its means is likely to be considerable. The French are accordingly parsimonious, or rather their rapacity and their gripe is

such, when added to their fickleness and inconstancy, as to account fully for those instances of regardlessness, profligacy, want of honour, perfidy, destitution of public principle, and all those opposite follies and crimes, which have shocked every other nation during the last forty years. It is a point, however, of favourable contrast between the French and English, that the former respect no man for his money alone ; while, in England, there is no degree of ignorance and intellectual degradation that may not be rendered respectable by cash.

I conclude by observing, that French character has lately been undergoing a vast improvement, because its sensibility, cleverness, and passion have for some time been directed by far more extensive knowledge and to far nobler purposes. It has its reward in taking the lead in the career of continental freedom, grandeur, and happiness.

SECTION III.—*The Germans.*

With Germany, I am little acquainted ; and I shall therefore speak especially of the German Goths, who chiefly confer the national character,

and whom I have had most opportunity of observing.

These people are of moderate stature, and fair complexion, and have broad and short heads, hair of some shade of flaxen, yellow, or brown, grey eyes placed considerably apart, noses generally low at the root, and angular jaws.

The influence of the broad and short Gothic head and the permanence of its functions will be found generally illustrated in the character of the Germans, of which I cannot give a better notion than by contrasting

GREEK AND GOTHIC ART, ETC.

It is sufficiently evident, that most nations differ in general character, and that each of their particular qualities is correspondingly modified. This character and these qualities can be known only by anthropological examination.

The population of ancient Greece appears to have been composed of tribes which, both in origin and character, more or less resembled the Celtic ones.

The population of Germany, though partially Sclavonic in the North and East, and partially Celtic in the South and West, is chiefly and fundamentally Gothic.

No event has so much influenced the science, the politics, and the religion of Europe, as the irruption of that race ; and if, in his view of these, M. D'Alembert had had any anthropological knowledge, the Discours Préliminaire of the French Encyclopédie might have been something more than a piece of fine writing. That event, indeed, changed every thing in Europe, generally, though not always, for the best.

As the most remarkable points in the Gothic character, so distinctly evidenced in Germany, have not been pointed out by any writer with whom I am acquainted, I shall briefly sketch them here ; and to render them the more intelligible, I shall contrast them with some points in the Greek character.

A tendency to minuteness, detail, and complication, is as characteristic of German, as a tendency to simplicity and grandeur was of Grecian, mind ; and this will be found to influence and

to harmonize with all its other faculties—secrecy, mysticism, &c. as well as to explain its mode of life, whether individual, domestic, civil, political, or religious.

This fundamental circumstance, then,—this tendency to minuteness, detail, and complication, may be seen in every effort of German mind, the more obviously if compared with the corresponding efforts of Grecian mind.

In architecture, the Greek temple is equally simple as a whole and in its parts; and such is its harmony, that, if even a fragment of it be seen, the whole may be predicted.—The Gothic temple,* on the contrary, is complex in both respects—it is covered, I may almost say composed, of a tracery of such minuteness and complication as to be absolutely unparalleled, and, unlike the Greek temple, that creature of genius which, if ever so small, would be grand from the art of its proportions, the Gothic temple is never grand but by the vulgar expedient of general magnitude.

* Whether Gothic originally or only by adoption, is of little consequence in the present view.

In music, the Greeks, if we may judge from their poetry and all their arts, or from the Celtic music of the present day, possessed only a simple melody — nay we are told, that they absolutely proscribed harmony as leading only to abuse, to a mistake of the means for the end — of the resource of the instrument for the power of expression. — German music, on the contrary, is a complicated harmony, in which all these mistakes are made — a sort of arithmetical music, or musical arithmetic,* an exhibition chiefly of instrumental power, which has no further influence over the heart or affections than in producing (its most suitable tribute) that false and unnatural grin which those who affect to understand and to be pleased with it, assume, and which is admirably contrasted with the natural expression of delight with which the same faces beam when a simple melody springs out of the nonsense and the horrors of the harmony.

* The Germans are arithmetical even in all that regards the passions. "They add emphasis to their oaths," as a recent traveller has observed, "by numerical process; and a hundred thousand million sacraments is the ordinary climax of rage."

The language of Germany is peculiarly complicated in its structure; and even its letters differ from the Greek only in being tortured into minute and complicated angles and hooks.

German philosophy, instead of resembling the Greek, is a chaos of complication and confusion — a sort of drunken mysticism, which its authors sometimes, the German people seldom, and other Europeans never, understand, — which draws a veil between German and European mind, and almost cuts off Germany from European civilization.

In regard to the manners of Germany, a traveller has observed, that society is filled with the complex relations of sentiment. This minuteness and complication is indeed intimately connected with the apathy by which the true German is distinguished, and is the very origin of his slowness and want of decision.

Is it surprising, then, that that which affects the arts, the language, the science, and the manners of Germany, should affect its political and religious affairs? Would it not, on the contrary, be anomalous and wonderful, if it were otherwise?

The political face of Germany is accordingly as minutely divided and as complicated as the German mind. Germany is parcelled out into petty states with every form of government, but the right one, and every complicated and jarring interest which imagination can conceive.

Happily, this complication of political forms and political interests, prevents the yet greater predominance of the very worst form and the worst interest. The jarring, however, of German political interests is rendered inert, not merely by the complication, but by the consequent slowness and indecision of German mind ; and, were it not for this constitution of mind, Germany would be the theatre first of war, as Greece was in ancient times, and ultimately of triumph over aristocratic oppression.

Such also is the case with religion in Germany. The discords of popery and protestantism seem not unsuitable to the harmony of German religion. The diversity of religious opinions prevents the predominance of any one opinion. Theories and creeds, moreover, evaporate in apathy and indeci-

sion in that country, which would excite civil animosity and war in any other.

Notwithstanding all this, however, as well as the total want of energy, Germany contains perhaps more knowledge than any other country in Europe.

SECTION IV.—*The Italians.*

In Italy, there is great difference both in national features and national character.—The Milanese are more frank and open than the other Italians.—Of the Romans, the higher classes are said to be sensible, well-informed, and quick in thought, but selfish and distrustful; and the beggars, sullen and insolent.—As to the Neapolitans, says Mr. Galiffe, if you accuse a native of any other part of Italy of endeavouring to cheat you, he immediately exclaims, *non cé paura, non sono Napolitano.*

Of an ancient Roman scull in his possession, Blumenbach says, it has an external occipital protuberance, broad and extremely projecting, “*pro-tuberantia occipitalis externa latissima et ingenter eminens.*” I find this accord precisely with two Roman sculls in my possession. This indicates

the immense power of the passions among that people, and is quite conformable to history.

Of the Italian character, I cannot give a better notion, or one more conformable with the preceding fact, than by the following

COMPARISON OF THE MODERN WITH THE ANCIENT ROMANS.

Exaggerated notions of the moral and political grandeur of the ancient Romans have long exercised a most injurious influence over the minds of modern nations.

It is true, that the superiority of their arms and armour enabled the Romans to subdue and plunder comparatively defenceless barbarians ; it is true, that the enormous disproportion of their mere physical force rendered it easy for them to overwhelm the Greeks ; but it is not less true, that even the superiority and success of their arms have been exaggerated by the innumerable falsehoods of their historians. It is also certain, that these historians, by assigning to their countrymen motives of action which they never felt, and conduct

which they were incapable of following, have always given the air of valour and virtue to mere cruelty and crime. Hence, Roman literature has produced most unfavourable effects on the imagination, the taste, and the moral feeling of modern Europe.

It is not a little remarkable, that the very literature which has thus vindicated a system of the most dishonest and remorseless plunder, was itself one vast plagiarism from the Greeks. The coarse minds of the Romans could faintly apprehend, but were incapable of either fully feeling or strongly expressing, the simplicity, the delicacy, and the dignity of Grecian thought: they therefore merely translated or copied it. Virgil, and Terence, and Cicero, were accordingly the feeble imitators of Homer, and Menander, and Demosthenes. Their literature was thus in admirable harmony with their moral and political character.

Their fine arts corresponded. For these arts, indeed, they had no taste; but they could not resist the temptation to steal obelisks from Egypt, and statues from Greece, and marble columns from all countries,

though these they never could adapt to their architecture. In the avarice of plunder and possession, however, they crowded obelisks, statues, columns, palaces, and temples, into spaces unfit for their reception, and they imagined this accumulation to be the summit of grandeur.

The literature and arts of Italy have, indeed, twice been renowned ; but, in both instances, they have been borrowed from the same illustrious people to whom European civilisation owes all it can boast. It was the Greeks who, on the fall of Constantinople, again introduced the arts^s into Italy, and gave a Grecian character to her sculpture, her painting, and her music. Rome, then, except as the plunderer of other nations, has never been more than Greece has made her.

If, from such exaggerated notions, injury has arisen to the imagination, taste, and moral feeling of modern Europe, a still greater one has flowed from the neglect to compare the modern with the ancient Roman character thus duly appreciated. It would otherwise have been seen, that, just as

ancient nations submitted to the *arms*, modern ones submitted to the *art*, of Rome, exchanging merely the despotism of *power* for that of *pretension* — of *force* for *fraud*.

No observation is perhaps at once more frequent and more false, than that the modern is utterly different from the ancient Roman character. The reverse is true. These differ no more from each other than the character of the *thief* does from that of the *robber*. The ancient or military Roman was a brave robber: the modern or priestly Roman is a cunning and cowardly thief.

Even this trifling difference has arisen less from any change among the Romans themselves, than from the extraordinary change among the nations around them. The Gauls, the Britons, and the Germans, with an increase of wealth and all the invitations to plunder, have learnt the art of defending it; and the Roman must now *cheat* the civilized man, instead of *plundering* the savage.

But let us contrast more minutely the modern with the ancient Roman character, and we shall

find that they have always had precisely the same objects in view, and have always employed precisely the same means of achieving them.

The selfishness of the ancient Romans was certainly the most striking, and I believe it will be found to be the most fundamental, trait in their character. With this, were associated that sullenness, moroseness, arrogance, and insolence, which are displayed in every page of their annals.

The modern Romans (and I confine myself to these Italians, as the fairest illustration) strike every traveller as a pale, dull, sullen, dissatisfied, morose, arrogant, and insolent race. The lower classes rarely speak except to beg alms, which, when offered, they tear from the giver, without taking the trouble to thank him, or showing the slightest sign of satisfaction. The highest classes are remarkable for the same dull and dissatisfied appearance. “There is something in the sulky insolence of the Romans,” says Mr. Galiffe, “in their morose, ill-natured looks,— that puts one strongly in mind of what they were in the days of their prosperity.”

Excessive regard for self is inseparable from disregard for others. The absence, or the extreme weakness, of individual or domestic affection was a striking characteristic of the ancient Romans ; for that is always a feeble faculty, over which others may triumph. Hence, sprang the sacrifice of the sons of Brutus, and many other acts which have not been rightly understood ; and hence, more easily still, the innumerable acts of inhumanity which were the means of Roman wealth, pleasure, and power.

The modern Romans have equally evinced this absence, or extreme weakness, of individual and domestic affection. I have heard of the wife of a Roman bandit, who, in the spirit of Roman virtue, stabbed her infant to the heart, to prevent its cries betraying the concealment of its father. Even the Romish religion bears hellish marks of this characteristic. It is reserved for such christianity alone, under the sanction of “God on earth,” to mutilate male children in order to procure soprano singers for the chapel of the Pope,—as well as to excite every bestial passion in those who are unm

tilated, by inflicting the law of celibacy on the clergy. This law could originate only among people in whom the domestic affections are absent or weak ; and admirably has it, by insulating its agents from every foreign interest, served the purpose of modern Roman wealth, pleasure, and power, and enabled it, without compunction, to trample upon and to outrage humanity, in the inquisitional tortures and autos da fé, which beings thus destitute of affection could alone invent.*

Let me add a few words as to the cruelty of the ancient Romans. — Slavery, in itself a proof of cruelty, having excited insurrections, they enacted a law declaring “ that if any citizen were murdered

* In the Neapolitan territory, corresponding characteristics are met with. A recent traveller tells us, that “ a poor woman had expired of hunger in the middle of Toledo ; and I had seen several persons of her own sex, some of them very well dressed and evidently above the vulgar, pass by the corpse as coolly and as unmoved as if it had been that of a dead dog ! I cannot express how it cut me to the heart to see so much insensibility in that part of the human creation, whose softness and sympathy is our only consolation under so many afflictions ! I really believe that I should have been less shocked to see men savagely tearing each other to pieces !”

in his house, all his slaves should be put to death, on the pretence that they must have been accessaries, or they would have prevented it." — Their gladiatorial shows, the result of the most unnatural cruelty, were carried to a frightful extent. Cæsar is said to have exhibited three hundred and twenty pairs of gladiators ; Vitellius to have had combats in all the streets of Rome ; and Claudius to have exhibited nineteen thousand malefactors and gladiators on one occasion. The exhibition of gladiators indeed was ever the best recommendation to the people, who are acknowledged to have expressed their pleasure at the flow of human blood by shrieks of joy and shouts of approbation. — Toward their prisoners, malignity was mixed with cruelty. It is well known that, after the storming of Carthage, Scipio, one of the scoundrels held up to the admiration of our youth in schools, ordered the prisoners to be torn by wild beasts ; that, on occasion of triumphs, persons were hired cruelly to insult the miserable captives ; and that foreign kings, prisoners of war, were generally murdered by these monsters at the moment the consul as-

cended the capitol.—As to cruelty and thirst for blood, indeed, the whole history of these people is worthy of the Ashantees; and it would never have been thought better of, but for the, now happily detected, falsehood of their historians, and the interest which the aristocracy of all nations have felt in obtaining respect for their Roman prototypes.

Now, the regard for self and disregard for others, which I have described, cannot possibly be cherished without corresponding means. It is not candour, peace, and forgiveness, but cunning, contention, and revenge, which must achieve their purpose.

Of the cunning of the ancient Romans, and of that of the modern ones, or even of Italians very generally, it is unnecessary to speak in detail. Every page of the history of the one, and every act of the life of the other, display it in the greatest perfection.

Let me add also a few words as to the treachery of the ancient Romans.—Affecting private and personal faith, their cheats and frauds were always on a great and profitable scale. It has justly been

observed that they always quarrelled with rivals when it could benefit themselves ; that every people who once were their friends, ended by becoming their slaves ; and that, in every instance where interest clashed with honesty, they spurned the latter. — When, says an excellent article in the *The Westminster Review*, we find a people incorporate, under the venerable name of priests, a joint-stock company of traders in faith and religion — who are regularly educated for the forgery of invoices to cover their fraudulent morality — a college of unprincipled sophists, who, whether an unjust war is to be declared, a people to be robbed of its rights, a solemn treaty to be violated, or even a wife taken from her husband — with a comprehensive iniquity justify bad faith and violence in all these cases, by formulæ of dexterous evasion, and prostitute the sacred name of religion with such effrontery that the fullness of indignation is choked with rage or degenerates into irony, — and when the first men of the state, canvass, bribe, and intrigue for admission into this holy alliance of perfidy and deceit,— we call that people faithless from system.

The spirit of contention and pugnacity which distinguished the ancient Romans, is a natural consequence or accompaniment of the absence of natural affection. It is unnecessary to illustrate its existence among that people in the very highest degree, or to dwell here on its consequences.

The modern Italians have lost none of the ancient characteristic. Its illustration in modern, is nearly as unnecessary as in ancient times. Deeply as they detest their oppressors, they yet more deeply detest each other. There is scarcely a state or town of Italy which does not hate its neighbour, and there are few Italians who are free from envy of the fame, or hostility to the interests, of their countrymen. A difference in style or in taste is a cause of the bitterest contention and the most unmitigable hatred. The Roman priesthood, in particular, literally composes a militant church.

The revengeful spirit of the ancient Romans is so well known, that it would be pedantic to quote illustrations of it.

The modern Romans are notorious for the dan-

gerous nature of their enmity. They brood over their injuries, we are informed, “with a degree of malice of which they would not be capable, if they thought they could easily avenge them; and, as they are possessed of few ideas, that one passion which happens to take full possession of their minds, festers sooner or later into a crime.”

To attain their object, these dispositions require perseverance. Unyielding determination, in the ancient Romans, was naturally associated with the preceding characteristics, and it is equally unnecessary to illustrate its existence among that people, or to dwell on its consequences.

The modern Romans have as unyieldingly persevered as the ancients. If these, when Hannibal was at the gates of Rome, or the Gauls at the foot of the Capitol, abated not one jot of their demands, so neither has papal power yielded one item of its pretensions, and, at this very moment, it asserts the wildest of these as firmly as in the days of Gregory the Seventh.

Now, the base passions I have enumerated, have been only those means of wealth, pleasure, and

power, which have been equally employed by the ancient and the modern Romans.

In regard to avarice, the ancient Roman character is marked by it from the first to the last. The first Romans were an association of robbers ; they never ceased to rob while a nation worth robbing was known to them, or could be reached by them ; their grandeur was the result of no science or art, but of robbery and crime alone ; they fell only when the plundered nations, learning from them the use of arms, were able to take their own, and to leave the robbers in their original destitution.

Substituting art for arms, and fraud for force, the modern Romans have availed themselves of all the ignorance, imbecility, and superstition of mankind, to extract from them their wealth ; and they have done this far more easily, and not less effectually, than their ancestors did by the opposite means. By cunningly rendering every individual willingly tributary, they have for ages derived from many European states far greater revenues than those of their kings ; and if these revenues have

fallen off in one age or country, they have encreased in another.

That voluptuousness, in its most extravagant excess, was peculiarly an ancient Roman vice, history testifies. It was practised by the rich at the expence of humanity, honour, and decency ; and it was found by them to be the most effectual means of corrupting the poor, who eagerly sold for it their liberty. The long succession of their emperors displayed this vice in a degree that the world had never previously witnessed.

The modern Romans have been not less remarkable for voluptuous indulgence. Italy has, in this respect, been the sink of Europe ; and Rome, the sink of Italy. The popes, it is especially remarkable, are the only princes of modern times who, in this respect, have rivalled the ancient emperors — if they have not actually excelled them.

Power, by the ancient Romans, was directly attained : force was essential to their means of procuring wealth ; and, from that, power was inseparable. By the force of arms, therefore, they sub-

dued the nations ; and they exhibited their sovereigns captive and in chains during their triumphal processions.

Incompatible as was this conduct with the spirit of christianity, the priesthood of modern Rome has been unable to resist the native spirit even in its most extravagant acts. The Popes have placed their feet on the necks of kings, and subjected them to degradations as deep as ever the emperors inflicted.

Such have been the objects equally of modern and of ancient Roman ambition-- wealth, pleasure, and power, to an excess which has involved the ruin of all around them, and which Rome has ever exercised in defiance and in contempt of honesty, decency, and humanity.

Such, in fine, is the perfect similarity of the ancient and modern Roman character. The ancient or military Roman, as already said, was a brave robber ; the modern or priestly Roman is a cunning and a cowardly thief. This comparison, therefore, establishes the point I had in view — that, just as ancient nations submitted to the arms, modern ones have submitted to the art, of Rome, exchanging

merely the despotism of power for that of pretension — of force for fraud. *

* Mr. Hope has taken a somewhat similar view of the identity of character in the ancient and modern Greeks.—“The complexion of the modern Greek may receive a different cast from different surrounding objects: the core still is the same as in the days of Pericles. Credulity, versatility, and thirst of distinctions from the earliest periods formed, still form, and ever will continue to form, the basis of the Greek character; and the dissimilarity in the external appearance of the nation arises, not from any radical change in its temper and disposition, but only from the incidental variation in the means through which the same propensities are to be gratified. The ancient Greeks worshipped a hundred gods; the modern Greeks adore as many saints. The ancient Greeks believed in oracles and prodigies, in incantations and spells; the modern Greeks have faith in relics and miracles, in amulets and divinations. The ancient Greeks brought rich offerings and gifts to the shrines of their deities, for the purpose of obtaining success in war, and pre-eminence in peace; the modern Greeks hang up dirty rags round the sanctuaries of their saints, to shake off anague or to propitiate a mistress. The former were staunch patriots at home, and subtle courtiers in Persia; the latter defy the Turks in Mayna, and fawn upon them at the Fanar. Besides, was not every commonwealth of ancient Greece as much a prey to cabals and factions, as every community of modern Greece? Does not every modern Greek preserve the same desire for supremacy, the same readiness to undermine by every means, fair or foul, his competitors, which was displayed by his ancestors? Do not the Turks of the present day resemble the Romans of past ages, in their respect for

Circumstances and events, however, will soon, I trust, direct Italian mind to nobler purposes ; and it will then make an advance which will compensate for previous degradation, for, owing to the blending of Italian, Greek and Gothic races, it is of high prospect and promise.

the ingenuity, and, at the same time, in their contempt for the character of their Greek subjects ? And does the Greek of the Fanar show the least inferiority to the Greek of the Piræus in quickness of perception, in fluency of tongue, and in fondness for quibbles, for disputation, and for sophistry ?— Believe me, the very difference between the Greeks of time past, and of the present day, arises only from their thorough resemblance ; from that equal pliability of temper, and of faculties in both, which has ever made them receive with equal readiness the impression of every mould, and impulse of every agent. When patriotism, public spirit, and pre-eminence in arts, science, literature, and warfare were the road to distinction, the Greeks shone the first of patriots, of heroes, of painters, of poets, and of philosophers. Now that craft and subtlety, adulation and intrigue, are the only paths to greatness, these same Greeks are — what you see them ! ”

CHAPTER VII.

APPLICATION OF THESE PRINCIPLES TO PRO-
FESSIONS, &c.

THE practice of every profession and trade influences the countenance, so that under the effects of each, the most dissimilar countenances approximate more or less in certain respects. The cause is obvious. Every human pursuit is accompanied with a corresponding condition of mind which, when habitual, must influence the features, and many pursuits absolutely require an assumption at least of suitable expression which becomes ultimately fixed, and constitutes professional grimace.

In this way, may we always distinguish the teacher, the physician, the lawyer, the parson, &c.

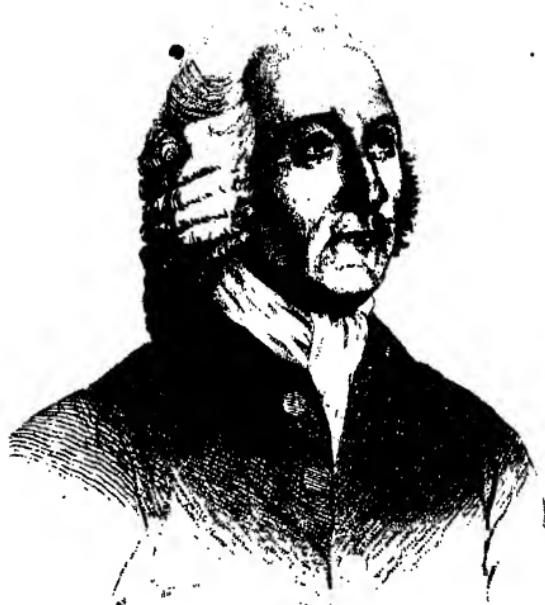
from each other, quiet and noiseless trades, from turbulent and boisterous ones, &c. &c.—In proof of this, I shall here give a few illustrations.

The Teacher, especially of the young and troublesome, has so perpetually the smile of approbation and the frown of displeasure alternating in his face, that both become to certain extent fixed, and an arrangement of features is finally acquired, which may almost be supposed to serve both purposes at once, so as to save him all trouble of changing [see Plate XIII.], and of which, at the same time, the somewhat mysterious and inscrutable character tends admirably to keep its objects upon the *qui-vive*.

The Physician finds the look of profound knowledge, of serious thought, of kind sympathy, and of accommodating pliability so essential to professional success, that the assumption of their expression peculiarly distinguishes him. Such, indeed, is his extreme pliability that the snake twining round the rod of Esculapius has been thought to be originally intended as a practical lesson for him. [See Plate XIV.] — But I will not



THE SCHOOLMASTER.



THE PHYSICIAN.



THE LAWYER.

press this. What nobler objects might not the physician, above all professional men, have in view! What far more dignified demeanour might he not justly assume!

The Lawyer, in general, is originally induced to make choice of his profession by a feeling of aptitude for it — a consciousness, too often, of that hardness and cold-heartedness which are essential to his being a means indifferently of right, or of the most cruel wrong, of that sharpness and cunning which can unsparingly turn every event to his client's, and therefore to his own, purpose, and of that rapacity for money which cares not how it is got, if *lawfully* got. The most honourable men in the profession are the most ready to acknowledge this, and to rejoice at the lustration which has been begun. — See Plate XV., in which may be seen some of the hardness and sharpness of the hacknied lawyer, mixed with better qualities.

The Clergyman, it is to be feared, is, in too many instances, originally induced to make choice of his profession by a feeling of inaptitude for it — or at least of what all but himself and friends would

deem inaptitude. He is, not unfrequently, a dependent member of some aristocratic family, educated as if, through favour only, he were one day to be provided for, independent of all fitness and merit. His requisites are, too often, some mere forms of study, and that external appearance of averseness to sensual indulgence which frequently ensures its reality, its excess, or its perversion. Hence, he sometimes presents a countenance in which sensuality, strongly characterized in every feature, is covered with a transparent film of sanctity, of which the composure extends no deeper than the skin. The most sincere and honourable men in the clerical profession are precisely those who most deeply deplore this.—See Plate XVI., in which some small degree of pleasurable indulgence is thus slightly varnished over.

Plate XVII. illustrates the effects of a quiet and noiseless trade, in a Weaver; and Plate XVIII. illustrates those of a turbulent and boisterous one, in a Miner.



“THE CLOTHES-HORSE”



THE BOY AVELL.



A MINER

CHAPTER VIII.

APPLICATION OF THESE PRINCIPLES TO INDIVIDUALS, OR BASIS WHICH THEY AFFORD FOR PHYSIognomy IN GENERAL.

SECTION I.—*The Head generally considered.*

THOUGH these characteristics have, in the preceding part of the work, been applied only to the varieties of the human race, and to different sexes, yet, it is obvious, that they all apply with equal correctness to individuals of whatever description ; and that they, therefore, constitute the first principles of physiognomy, which have not hitherto been thus founded on physiology.

Thus, organs of sense greatly developed, in comparison to the cerebrum and cerebellum, indicate the pre-eminence of sensation, and a diminished degree of intellect and voluntary power ; the cere-

brum greatly developed, in comparison to the organs of sense and the cerebellum, indicates the pre-eminence of intellect, and a diminished degree of sensation and voluntary power ; and the cerebellum greatly developed, in comparison to the organs of sense and cerebrum, indicates the pre-eminence of voluntary power, and a diminished degree of sensation and intellect.

In order to ascertain the magnitude of these organs in the living body, than which there is no experiment at once more amusing and useful, the process is simple : that of the organs of sense is obvious to every observer ; so is that of the cerebrum ; and that of the cerebellum is easily ascertained, as, in all superior animals, it begins precisely opposite the place where the face terminates, that is, opposite the articulation of the lower jaw, which is immediately before the ear, and it extends to the spine which projects from the occiput or back of the head. — In both the last cases, allowance is to be made for varieties in the thickness of the cranium, which are rarely very remarkable.

Thus, we possess the means of ascertaining the degrees of the three simple powers, sensation, mental operation, and volition, in man and all the superior animals, in whatever proportion they may be combined.

Moreover, wherever these organs are elongated or elevated, their functions are intense and brilliant : wherever they are wide, these are permanent and calm. Hence, as will afterwards be seen, the elevated cerebrum appears to be associated with imagination and poetry ; the broad one, rather with mathematical and mechanical ability.* When the cerebrum is longest anteriorly, observation excels ; and when it is longest posteriorly, passion :

* The Mongolic or rather Gothic people have, with regard to intellect, been rather distinguished for calculation and mechanical talent ; while the Arabic or Celtic people have, even in the common expressions of their language, evinced imagination and poetical talent. The broad-headed Goth has stamped on modern science chiefly the character of mechanical invention : the longer or higher headed Arab has in all ages been characterized by poetical phraseology ; for, on this subject, the common expressions of a language, afford a stronger argument, than the production of a few great poets, whose existence depends more on such incidental circumstances, as general illumination, political freedom, &c. which have fre-

when the cerebrum is elevated before and depressed behind, observation is more intense, passion less so ; and when it is depressed before and elevated behind, observation is less intense, passion more so : when the cerebrum is broad before and narrow behind, observation is more permanent, passion less so ; and when it is narrow before and broad behind, observation is less permanent, passion more so.

Even without measurements, these circumstances may, in general, easily be discerned by the eye.

For a further illustration of these criteria of intellect, see Plate I. The inscriptions on the plate itself, if examined along with the preceding paragraph, render this doctrine perfectly simple.

quently fallen to the lot of northern nations. Consistently, therefore, with previous principles, no supposition so probable presents itself, as that the calculatory or mechanical talent of the one, is connected with his breadth of cranium, and the imaginary or poetical talent of the other, with his length or elevation of cranium. In confirmation of this, it is worthy of notice, that considerable breadth of the upper part of the head, is allowed, even by the most superficial observer, to give an air of calmer sagacity ; while great elevation, as in Shakespeare, Lopez de Vega, Charles the Twelfth, and a multitude of great men, gives always a strong impression of intenser genius.

Now, the various combinations of these various degrees of sensation, mental operation, and volition, originate all the passions and habits of life; so that these passions and habits by no means require distinct organs, as Gall has supposed: they are compound in their nature, and result from the combination of these various degrees of these simple powers.

In now proceeding to consider the face, it is not necessary again to repeat what was said of the forehead. Its form, with regard to height, breadth, and convexity, is involved in the previous consideration of the three great intellectual organs, and in that of the cerebrum or organ of mental operation in particular, with which it is chiefly connected.

SECTION II.—*Advantages which the Face presents as the subject of more minute Physiognomy.*

Having thus established the first principles of physiognomy, founded, as they ought to be, on a comparative view of the three great organs of sen-

sation, mental operation and volition, we now, assisted by the same guide, proceed to its minuter details.

"

As to the doctrine of Gall, it cannot be denied, that, with thirty or forty organs arranged so ingeniously over the head that the predominance of one may be made accountable for the inactivity of another, while every effect is the result of their varying combinations, almost any craniological system may be maintained for a time.

From the first, indeed, this arrangement produced some whimsical and ridiculous effects, which the subsequent change of the names of the organs by no means removes. Thus, Gall placed the organ of Theosophy not only near to, but in actual contact with, the organ of Mimickry. Now, it is evident, that if one of these organs be very high, the other cannot be very low; for such sudden transitions exist not on the surface of the scull. Hence, if the organ of Theosophy be very high, the organ of Mimickry cannot be very low; and as energy of function is inseparable from healthy

magnitude of organ, it remains for the followers of Dr. Gall to prove what connexion there can possibly be between fun, and the knowledge of God ! The organ of Music, too, is in contact with the organ of Theft ; and as in the case of the one being very high, the other cannot be very low, it follows, not only that the greater thief a man is, the more *likely* he is to be a musician ! but that the greater musician a man is, the more likely he is to be a thief ! The change, moreover, of the first two names into Veneration and Imitation, and of the second two into Acquisitiveness and Melody or Tune, does not much mend the matter.— But to lay aside merriment, for which it is to be regretted that Gall should have given any scope, it is not to be denied, that he is entitled to praise for the perseverance employed on this subject ; and it is only to be regretted that he has not sufficiently employed scientific principles, or shunned empirical methods.

In a foot note, I give the names of these organs, as improved by the followers of Gall, with re-

ferences to the Plates in which their places are seen.*

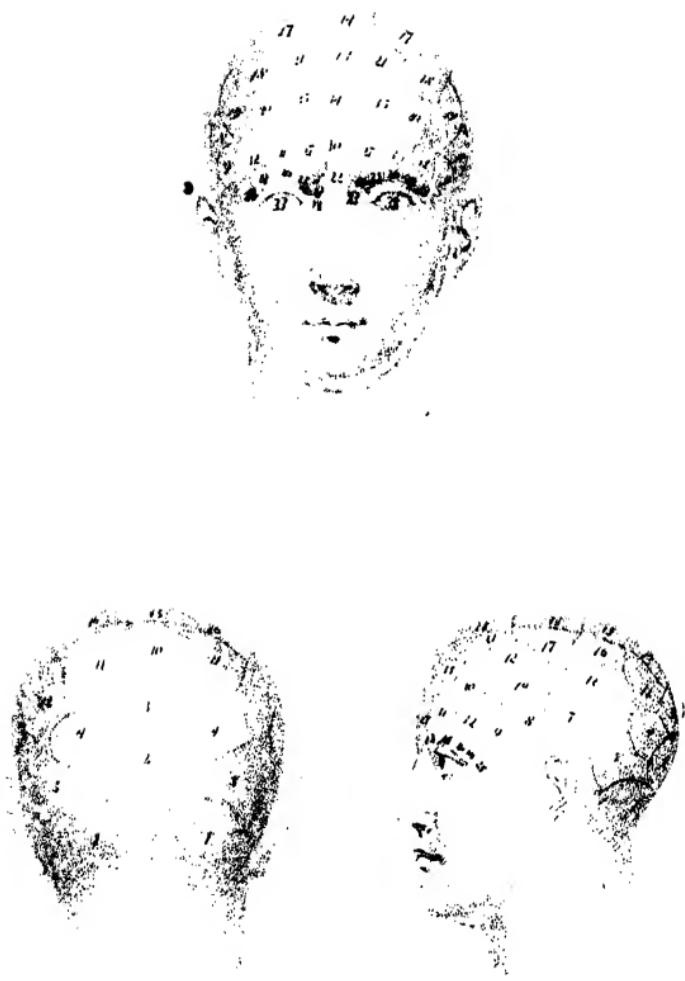
The minute details of physiognomy, however,

* NAMES OF THE ORGANS,

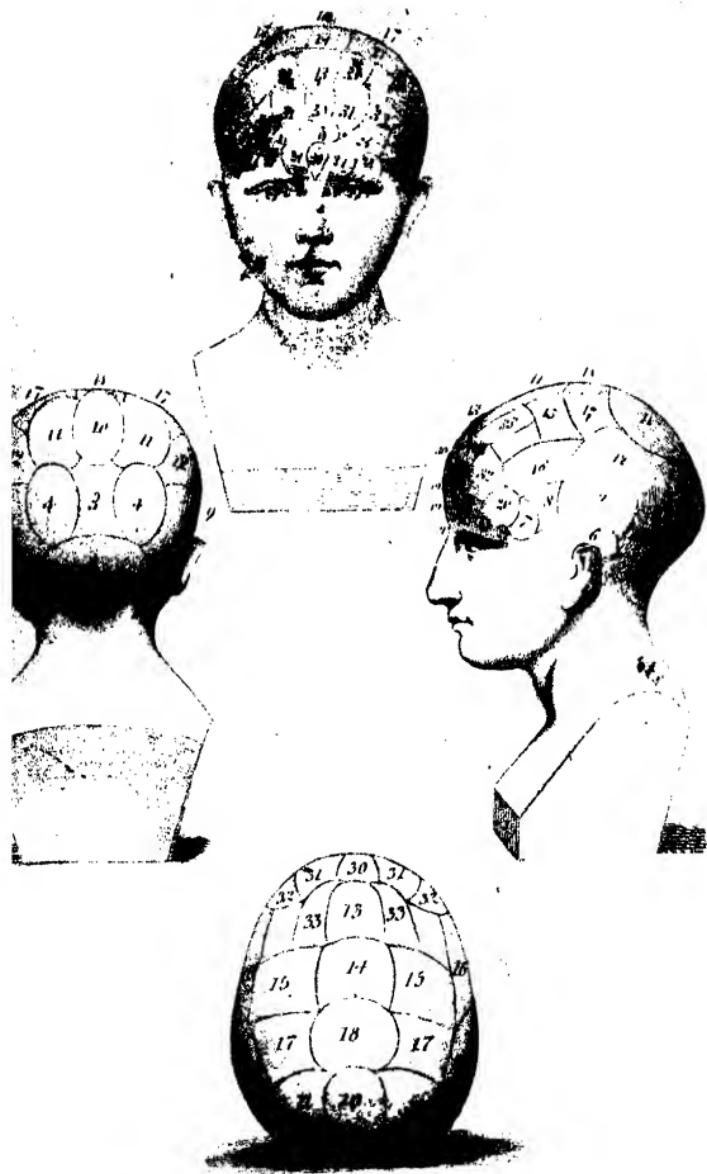
According to Dr. Spurzheim. [See Plate XIX.]

No. I. Organ of Amativeness.

- II. - - Philoprogenitiveness.
- III. - - Inhabitiveness.
- IV. - - Adhesiveness.
- V. - - Combativeness.
- VI. - - Destructiveness.
- VII. - - Secretiveness.
- VIII. - - Acquisitiveness. •
- IX. - - Constructiveness.
- X. - - Self-esteem.
- XI. - - Love of approbation.
- XII. - - Cautiousness.
- XIII. - - Benevolence.
- XIV. - - Veneration.
- XV. - - Firmness.
- XVI. - - Conscientiousness.
- XVII. - - Hope.
- XVIII. - - Marvellousness.
- XIX. - - Ideality.
- XX. - - Mirthfulness or gayness.
- XXI. - - Imitation.
- XXII. - - Individuality.
- XXIII. - - Configuration.
- XXIV. - - Size.
- XXV. - - Weight and resistance.



DISTRIBUTION OF ORGANIC ACIDS IN ACCORDING
TO THE SECTION



OF CRANIOLOGICAL ORGANS ACCORDING TO
WORKS OF DR SPURZHEIM.

are not to be satisfactorily found in any investigation, either of the superior or posterior part of the head, as Gall has attempted. The reasons of this are obvious. First, the superior and posterior

No. XXVI. Organ of Colouring.

- XXVII. - - Locality.
- XXVIII. - - Calculation
- XXIX. - - Order.
- XXX. - - Eventuality
- XXXI. - - Time.
- XXXII. - - Melody.
- XXXIII. - - Language.
- XXXIV. - - Comparison
- XXXV. - - Causality.

NAMES OF THE ORGANS,

According to other Craniologists. [See Plate XX.]

I. PROPENSITIES.

1. Amativeness.	6. Destructiveness.
2. Philoprogenitiveness.	7. Constructiveness.
3. Concentrative ness.	8. Acquisitiveness.
4. Adhesiveness.	9. Secretiveness.
5. Combativeness.	

II. SENTIMENTS.

10. Self-esteem.	15. Hope.
11. Love of approbation.	16. Ideality.
12. Cautiousness.	Wonder.
13. Benevolence.	17. Conscientiousness.
14. Veneration.	18. Firmness.

parts of the head present chiefly one or two organs very uniformly constructed, except with regard to the great and more general deviations which have been already explained; and consequently minute forms are with difficulty discerned on them, superficially examined. Secondly, the whole superficies of these organs is covered by the scull, somewhat irregular in its thickness, so as to render it difficult to calculate what may be the minute conformation of the subjacent parts. Thirdly, the scull covering these organs is itself covered with hair, so that any examination of them is thus rendered still more difficult. Fourthly, the dress of most nations presents an additional obstacle.

III. INTELLECT.

19. Individuality. { 1, or higher. 2, or lower.	26. Time.
	27. Number.
20. Form.	28. Tune.
21. Size.	29. Language.
22. Weight.	30. Comparison.
23. Colouring.	31. Causality.
24. Locality.	32. Wit.
25. Order.	33. Imitation.

The greatest error of the doctrine of Gall is the supposition that for every propensity, sentiment, or intellectual faculty, distinct organs exist, and the assigning consequently a multitude of simple and distinct organs, for functions which owe their existence to a combination of others.

There doubtless exist organs of observing, comparing, determining, willing, &c.; and if Gall had determined these, and then endeavoured from them to reason respecting their combinations in the individual propensities, sentiments, &c. to which they give birth, he would more nearly have approached the truth.

The great and simple organs he would have found in the curious and beautiful structure of the more internal parts of the brain. To every observer, these at once seem to present distinct organs, though certainly not of the particular kind to which Gall alludes; while the hemispheres appear rather to constitute one organ, which is connected with a number of others — probably that of memory, connected with so many of the intellectual functions ; and, on this fact, the sole worth of the doctrine may rest.

To expose clearly this greatest of all the errors committed by Gall, I must observe that he assigns the first of his propensities, *amativeness*, to an organ, the cerebellum, which I have proved to be the organ of another function ! Nor is this all : it is evident that, supposing the simple passion of *desire* to reside, as it really does, not in the cerebellum, but the posterior part of the cerebrum, it may easily be shown that the particular *species* of desire will depend on the action of the cerebral organ combined with *others* which, far from being indicated by any protuberance of the head, do not even exist in it. Amativeness cannot at all be indicated on the cranium, because it is a *modification* of desire, caused entirely by the power, and the accumulated secretion, of certain *glands*, of which I will only here say that they have nothing to do with the *head*? No blunder can be more egregious or more ridiculous.

With a little knowledge of the brain, of which Gall and Spurzheim were miserably destitute, it is easy to show the causes of the blunders committed by these craniologists.

In front of the head, the frontal sinuses, by projecting over the eye, exclude irrelevant objects, direct vision, and ensure its accuracy. The outer plate or side of these sinuses has no relation in form to the inner, and consequently none to the brain under it, as accurate examination will show. Yet these dreamers, misled by vaguely observing effects produced by its *external use*, as to the greater accuracy of vision, corresponding with its greater developement, have assigned to its projection their *internal organs* individuality, locality, size, weight, &c.! The blunder, and the mode in which it has occurred, are equally obvious. They assign functions to the *inner* side which belong to the *outer*!

On the side of the head, chiefly above and before the ear, are situated — internally the parts of the brain on which, as shall afterwards be shown, vitality depends, and — externally the muscles (temporal and masseter) of the jaw on which chiefly the seizing and masticating of food depends. With the encrease of these powers, this part of the head is always enlarged. These mystics, misled, as in the front of the head, by vague observation,

have assigned to the projection of this part their acquisitiveness, secretiveness, combativeness, destructiveness, &c.! Animals, indeed, *acquire, secrete, combat, and destroy* by means of *the jaw and its muscles*; but this is no reason for giving them so many *little* organs within the brain!

Under the back of the head, is situated the cerebellum, which I have proved to be the organ of volition — a function which is essential to the gratification of all the passions, because the muscular powers which depend on it are essential to all, and therefore to that of love as one of the most powerful. The developement of this part of course bears some proportion to the vigour of that propensity. These superficial observers, and worse reasoners have therefore assigned to the projection of this part their amativeness! as if no other purpose were served by the great organ of the will, on which every desire for its gratification and all muscular power depend!

I must further remark, that not only the preceding exposure, but the spirit of sheer hypothesis and systematizing in which the whole doctrine is

constructed, is such as to deprive it of all confidence. Thus, such has been Gall's resolve to convert the superficial convolutions of the brain into organs, and to assign every function necessary to human existence to those convolutions which are most superficial and may be supposed to make some *external* appearance (for without such appearance, there would have been no craniologizing), that he has calculated on no one observing his entire omission of as many more convolutions in the base of the brain, over the cerebellum, and between the hemispheres ! So that he makes out a complete man, or a complete mind, with the aid only of half the organic matter which the *surface* of the brain presents !

It is in this spirit, — that, as the anterior part of the brain, is evidently connected with observation, Gall has placed there distinct organs for every modification or combination of it --- individuality, form, size, weight, colour, locality, order, time, number, tune, language, &c. ; — that, as the upper part of the brain is evidently connected with imagination, he has placed there distinct organs for every

modification or combination of it — self esteem, love of approbation, veneration, hope, wonder, ideality, &c. ; — and that, as the posterior part of the brain is evidently connected with passion, he has placed there distinct organs for every modification or combination of it — philoprogenitiveness, inhabitiveness or concentrativeness, adhesiveness, &c. So that altogether overlooking the equally numerous convolutions on the base of the brain and elsewhere, he, as already said, makes out all the functions of the mind from half the organic matter which its mere surface presents !

Gall, then, has not only erred, even with regard to these organs, by mistaking their nature and limiting their sites, but he has still more egregiously erred throughout, in assigning a multitude of simple and distinct organs, for functions, which owe their existence to a combination of others.

In order to ascertain the frequent existence of any habit of mind, the search for minute and distinct organs must be abandoned : but, it is only necessary to ascertain the existence of the signs of those degrees of the simple powers, which are

requisite to constitute the habit, than which, according to the preceding principles, nothing is more easy.

Nature seems admirably to have preserved one of the great mental organs, open for our inspection. The face, containing the organs of sense, presents every possible advantage for the purpose of physiognomical examination. First, it exhibits several organs, each of which may be separately and distinctly examined. These organs, it will be found, present, if we may use the term, a kind of analysis of sensation : or in other words,—while in some of the inferior animals, one and the same organ receives several kinds of impression, and is sensible to light, touch, &c.—in man, transparent lenses transmit the rays of light ; tense membranes receive the concussions of sound ; convoluted organs receive the impressions of the odours which are wafted through the nose, in the air which we respire ; the moist papillæ of the tongue receive the impressions of taste ; and the delicately conformed and highly sensible tips of the fingers receive those of touch. Secondly, in the face, the soft parts or

rather the organs of sense, are quite superficial, and not separated from our view by osseous matter. Thirdly, little or no hair, and, in general, no mode of dressing, covers these organs.

These reasons for preferring the face, for the purpose of physiognomical observation, are precisely the counterpart of those which prevent the examination of the superior and posterior parts of the head.

From a vague perception of this truth, it has probably arisen, that the face, in particular, has ever been the principal subject of physiognomical observation, and forms almost the sole one of the celebrated fragments of Lavater.

The taste of Lavater was exquisite and unerring. To be assured of this, it is only necessary to compare any drawing and description in his larger work : the extreme and minute accuracy of his remarks are instantly acknowledged.

Although, however, by the keenest sensibility and the most exquisite taste, Lavater was eminently qualified for physiognomical observation, yet his excessive enthusiasm utterly impeded its steady

and regular progress as a science : its statements were tolerable only when delivered in the glowing diction of Lavater ; and, when expressed in more common language, had the air not only of extravagance, but of absurdity.

From want also of the power of generalizing in a great and extensive manner, he was incapable of arranging his own observations, and consequently could deduce from them no general conclusion.

The absence, moreover, of all anatomical and physiological knowledge — a circumstance, which which it is but just to say, that he himself was among the first to acknowledge and regret — this held him ignorant of the causes of all the motions he observed, and rendered impossible the establishment of general principles and the attainment of definite objects.

Destitute, however, as Lavater's work is of general principles, and impossible as it is to give any analytical view of it, it is nevertheless the most valuable work which has appeared on physiognomical science.

SECTION III.— *Classification of the Parts which the Face presents.*

In this point of view, nature presents other, and perhaps still more beautiful reasons for this preference of the face.

The intellectual part of the face is evident at once, in the eye, the ear, and the forehead ; and it is there consequently that we are to look for intellectual indications.

The effect of the expansion of these and the superior parts will be the general pyriform shape of the head ; and hence such form of head will be found to indicate a predominance of the intellectual system.

The vital and motive parts of the face are more blended ; so that their indications are not quite so obvious.

A little examination, however, will show, that the vital parts are generally internal ; as the organs of smell and taste, on which vitality depends, as

well as the various sinuses or cavities connected with these.

The effect of these expansions will be the general roundness of the face ; and hence such form of face will be found to indicate a predominance of the vital system, and persons having such form of face will almost universally be found to have larger bodies, shorter limbs, &c.

A brief examination will also show that the motive parts are generally external ; as the muscles and the osseous parts to which they are fixed.

The effect of these will be the general squareness or rather oblong form of the face ; and hence such form of face will be found to indicate a predominance of the locomotive system, and persons having such form of face will almost universally be found to have longer limbs, &c.

All mental operation, besides, and all volition is dependant upon sensation. By the face being left thus exposed, we are enabled not only to point out the capabilities of men with regard to sensation itself ; but, as all effects are dependant upon corresponding causes, we are also enabled in som

measure, to predict the mental operation and the volition which may result from given powers of sensation.

Moreover, the face thus presents not only organs of sense, or organs of impression ; its muscular parts are all under the guidance of the will, or of the organ of volition. Hence, the state of these muscular parts beautifully indicates the acts also of that organ on which they depend. So that the face may be said to present organs of volition as well as those of sensation.

Now, had organs of sense alone been exhibited in the face, we could not infallibly have predicted the extent of mental operation ; because, although no acts of the mind inconsistent with the obvious capacities of the organs of sense could have taken place, yet mental operation might have advanced to no very great extent. For it often happens, that the sensations, as in the negro, are strong, while the mental operations and volitions are weak. The existence in the face, however, of organs dependent on volition, as well as of organs of sensation, enables us accurately to predict the precise extent to which

mental operation has advanced, because all the acts of volition are the result of preceding mental operation, and could not have existed without it.

It is of much importance to attend to this fact.

As the face presents organs of two kinds, this is its greatest and most general division; and the first rule of physiognomy applicable to the face in particular, results from examining the predominance of one of these sets of organs over the other—of those of sense over those of volition, or vice versa.

Some countenances express great sensibility and little voluntary power. Hence, the vulgar often point out a species of beauty in countenances which they nevertheless grant to have little expression. Now, the truth in this case is explained by the rule that, some countenances present beautifully formed organs of sense and perhaps much sensibility, but no strongly delineated muscular parts, and consequently no proof of powerful mental operation; or, in other words, they have little expression: other countenances present strong muscular traits and much expression, but less beautifully formed organs of sense and less sensibility.

Some nations, as those of the East Indies, possess the former of these characters, namely, a fine oval face, beautifully shaped eyes and nose, and lips admirably curved, and, along with these, much sensibility; yet they have little expression, because the muscular parts of their face are scarcely apparent, and correspondingly they have a remarkably small cerebellum. This observation is also in general applicable to the faces of women compared with those of men.—Other nations again, as those of Europe, possess the last of these characteristics, viz. strong muscular traits and much expression, but less beautifully formed organs of sense and less sensibility. Such also is, in general, the case with regard to the faces of men, compared with those of women.

Thus, we have established the first and most general physiognomical rule that can be derived from the face individually considered.

Before proceeding to examine the individual organs of sense, it will be obvious to every one, that, as they are organs of sense, and not of mental operation, physiognomists have erred in endeavour-

ing to point out in them, direct indications of judgment and other faculties which belong entirely to mental operation, and which can be directly indicated only by the form of the superior part of the head, in which the organ of mental operation is situated. Nevertheless, the organs of sense may be said to present indirect indications of such mental qualities, because their existence may, in some measure, be predicted from certain degrees of sensibility, which the organs of sense themselves express; and the muscular or voluntary parts especially give such indications, because the acts of the will, which they obey, never take place unless preceded by mental operation.

It is, however, worthy of notice, that although muscular parts or organs dependent on volition enter into the composition of the face, yet all the motions which they perform, although we may denominate them expressive, are performed by no means exclusively for any such purpose as expression, but primarily for the purpose of rendering those organs of sense, with which they are connected, more fit for the reception of impression; and consequently, their

first and principal reference is to sensation, and not to volition. This, however, is attended with no inconvenience, because the organs of sense, thus influenced by the voluntary powers, enable us to calculate the degree of other functions.

SECTION IV.—*The organs of sense in particular.*

The number of these organs first demands our attention — Why are the organs precisely five in number? This is a question well worth being put. The answer is not difficult. These organs are five in number, because there are just so many states of matter capable of affecting animal bodies, and such a number of media in which they are involved. These are solids which affect touch, liquids which affect taste, fluids which affect smell, aeriform vibrations which affect hearing, and light which affects the sight. The states of matter, properly so called, are indeed only three, namely, solidity, liquidity, and fluidity, and require only three organs, namely, those of touch, taste, and smell; but it is

obvious, that the other two senses, of hearing and seeing, were indispensable to such a perfectly organized animal as man, in consequence of his being enveloped in the two great media of the atmosphere and of light. Had still other media existed, there would have been still other senses. The states of matter, then, and the media are precisely five in number ; and hence, the organs of sense are precisely five.

Another curious and important question is — Why are some of the organs double and others single ? Now nature seems desirous of rendering impressions in the more perfect animals as numerous, extensive, and powerful, as is consistent with their organization. Hence, instead of one organ of sense, like the Zoophytes, she has given them five ; and, instead of these being single organs, she has doubled them whenever it was possible ; and has permitted them to be single, only in those cases where certain other circumstances — certain complex offices, which they had also to perform, rendered the doubling of them impossible. Thus, the ear performs only the office of hearing, and con-

sistently with this principle, it is double. The eye performs only the office of seeing, and, in similar consistency, it also is double. But the nose and the mouth do not perform only the respective offices of smelling and tasting — they perform also that of speech. Now, it was necessary that the voice should be single. Hence, the nose and mouth are each a single and not a double organ. It is true that these form two different organs thus performing one function — the function of voice ; but it is worthy of notice, that nature has beautifully adapted them for the performance of distinct portions of that one function : articulation consequently takes place in the mouth ; resonance, in the nose. Thus, admirably does nature conform to the general principle above enunciated. It is further worthy of notice, that these two organs, in so far as they are two different organs of sense, receiving impressions from without, are externally separate ; and in so far as they form one and the same organ of voice, proceeding from within, they internally communicate.

A third question not less worthy of notice pre-

sents itself -- Why have these different organs situations so very different ; two of them, the eye and the ear, being placed superiorly, and two, the nose and mouth, inferiorly ? The reason of this is equally obvious. The eye and the ear are elevated in order to command objects placed at as great a distance as possible ; and the nose and mouth, which do not receive impressions from a distance, are placed below, in order to permit a ready communication with the lungs and stomach : Nothing, moreover, could have been more inconvenient, than the situation of the nose and mouth above the eye and ear, not only as it would have elevated senses which do not command distant objects, above senses which ought to command them, but as it would have required an unnecessary length of the canals which communicate with the lungs and stomach, and would also have exposed those nobler organs — the eye and the ear, to injury from food, &c. The reason, also, why the ear in particular is placed behind the eye, is, that, while each object of our vision occupies a limited situation, and can best be inspected by an organ placed before,

sounds, on the contrary, are diffused all around, and can more completely be impressed on organs situate on each side. Ample room is thus also given to the organs necessarily placed before — a situation which, in consequence of man's having the power of moving in one direction, is rendered evidently the best. The reason, moreover, why the nose is placed higher than the mouth, is not only that it is destined to command objects—odours namely, from a greater distance than the mouth, which for the purposes of taste must have liquids brought into actual contact with it, but there is another reason for their situation, which has a very beautiful reference to their use, as the organ of voice. All resonance (of which the nose, as we ave already stated, is the organ) tends to ascend ; and hence, the nose, in order to perform that office — to permit resonance, must be placed superior to the mouth — the organ in which articulation is actually produced. The organ of touch not being placed in the face, together with the other organs of sense, but at the tips of the fingers, is owing to this, that the organ of touch is neither,

like the eye and ear, affected by media universally diffused, nor, like the nose and tongue, by objects which are easily transported to them, but by solids which are sometimes not easily moved, and sometimes require an organ of a certain length and flexibility, to come in contact with their various parts. Hence, it has the present situation. Moreover, even if solids had all been easily moveable, and readily applicable to a fixed organ, yet, as the hands must have been employed to move them thither, it was evidently, in many respects, most advantageous that the organ of touch should reside in themselves : unnecessary movement is thus avoided, and the quickest and most accurate knowledge of objects acquired. It is for these reasons, then, that the organ of touch, instead of residing in the face, like those of the other senses, is borne about at the tips of the fingers.

These three very curious and interesting questions, have, till lately been utterly neglected ;* and,

* The preceding views respecting them were first quoted, with acknowledgement, from my lectures, by Dr. Pitta, in his "Treatise on the Influence of Climate."

with regard to the last, it may be justly observed, that, if it be worth the while of the naturalist to remark, that the habit of the rays, of lying always on their belly, renders it necessary for them to have eyes in the back of their head, as is exemplified in the skate, for eyes in the front would be buried in the sand, — it surely cannot be unworthy of the physiologist to assign the reasons for the situation of individual organs in the noblest of all animals.

Now, as the first rule of physiognomy, derived from the consideration of the face, was founded upon its consisting of organs of two kinds, namely organs of sense or impression, and organs of volition or expression ; so the second is founded on the former — the organs of sense thus generally considered. It is, that with regard to each of the organs of sense, coarse or defective construction indicates coarse or defective sensibility ; and, on the contrary, delicate and perfect construction indicates delicate and perfect sensibility.

We have next to inquire into the best order of enumerating, or arranging the organs of which we

have thus explained the number, the circumstance of their being double or single, and the different situation. Some enumerate them thus: touch, taste, smell, hearing, seeing; and others exactly reverse this order. The first arrangement commencing with touch, is the order of the accuracy of these organs; for touch is the most accurate of the senses, because it consists in the actual contact of solids, which are the least variable state of matter; taste is less accurate, because it consists in the contact of liquids, which are more variable; smell is still less accurate, because it consists in the contact of fluids, which are more variable still; and hearing and seeing are least accurate of all, because they do not consist in any actual contact, but depend upon the interposition of media — air or light. Hence, the echo utterly deceives us, as to the direction of sound, and the oar which appears perfectly straight in the open air, seems bent when partially plunged in water. This, then, is the order of their accuracy. The opposite order, commencing with the sense of sight, is the order, if we may so term it, of their dignity. The eye

may be regarded as the noblest organ, because it commands objects at the greatest possible distance; the ear commands objects which are nearer; the nose, those which must be wafted to it by the air; the taste, those which are applied to it in liquids; and the touch, those solids with which that organ must be carried into actual contact.

Upon this appropriation to objects situate at different distances, depends the third great physiognomical rule, applicable to the face in particular. This is, that a more developed and perfect form of any one of these organs, than of the rest, indicates the capability of receiving more perfect impressions from that particular species of object for which the organ is calculated, and also a capability of those more or less noble intellectual operations which most readily flow from such impression. Thus, although all the senses are subservient to the pleasures termed sensual, in opposition to those which are reckoned more purely intellectual, yet it is evident that some senses, as the mouth and nose, are more subservient to sensual pleasure. Hence, (to illustrate the preceding rule) their greater

developement, as in the brute, will indicate rather a susceptibility of sensual than of intellectual pleasure ; and, on the contrary, their being of moderate size and delicately constructed, will indicate a more moderate and delicate sensuality. On the contrary, the greater developement of the eye and ear — these nobler organs, to which language and the fine arts are addressed, will only indicate the greater capacity of these organs, for impressions in general, whether of a sensual or of an intellectual kind.

SECTION V.—*Peculiar Relation of each Organ of sense to the Brain, as essential to understanding the Expressions of each.*

Nothing ought perhaps more to surprize us than that the first principles of physiognomy, properly so called, to which we are now to proceed, should never have been established. No subject can be more interesting ; none has had bestowed upon it the labour of a greater number of men of genius ;

and none has so much perplexed enquirers or disappointed universal expectation.

This has been owing in a great measure to the circumstance, that enquirers have rarely combined physiological with general knowledge, and in a still greater measure to the circumstance, that they have more rarely still thought of exercising a strict analysis not only as to the parts presented to them and their immediate functions, but as to the remoter operations to which these lead.

As the object of physiognomy is to give superficial indications of the actions of remoter organs, it must be evident that our search for accurate indications will be vain, if we know not the precise connexion which subsists between each superficial part and those internal parts or internal actions which it indicates.

Thus, although we have hitherto known the various functions of the eye, ear, nose and mouth, yet no one seems to have enquired, whether an effect totally distinct in its character was not produced by the action of each of these parts communicated to the brain, — whether some of these or-

gans led not to emotions, and others to passions,—whether some of them were not subservient to animal, and others to intellectual purposes; and consequently it was impossible to assign to each its real indications.

Hence arise nearly all our embarrassments in the study of physiognomy. It is in vain to ask what the varying forms of the eye, ear, &c. indicate, if we know these only as organs of sense, and are ignorant of the character of the effects to which they lead. It is vain to seek for remoter indications, and to be ignorant of remoter connexions and effects!

The observing faculties, then, appear to depend on the anterior part of the brain corresponding to the forehead.

The comparing faculties seem to depend on the middle part of the brain.

The determining faculties appear to depend on the posterior part of the brain.*

The natural succession of these faculties is obvious.

* In a work on Anthropology generally, and in another on the Brain and Nervous System, I shall establish these and other points.

Observing, dependent on the anterior part of the brain, should evidently, as it does, succeed sensation, because it is immediately derived from it.

Comparing, dependent on the middle part of the brain, should as evidently succeed observing, because it can thence alone derive its means.

Determining, dependent on the posterior part of the brain, should not less evidently succeed comparing, because it can be founded on that alone.

Volition, dependent on the cerebel, should evidently, as it does, succeed determining, and influence muscular motion.

The result of observing is an idea : the result of comparing is an emotion : the result of determining is a passion, or, more simply considered, desire or aversion.

When the process of observing is complicated, it is called understanding : when the process of comparing is complicated, it is called reasoning : when the process of determining is complicated, it is called judging.

Consciousness regards present observation or

perception ; memory, that which is past. Imitation regards present comparing ; imagination, that which is past. Passion regards present determining ; poetical feeling, that which is past.

To each of these processes, a corresponding organization appears to exist in the internal part of the brain ; but I can discover no vestige of any, for the thirty or forty little functions of the craniologists.

Thus neither are minute and mystical organs here assumed ; nor are their functions other than conformable both with actual observation and with obvious causes.

To limited and intense observation, appear to follow order, method, or even resource ; and to larger and permanent observation, appear to follow imitation and even imagination.

These, even if truths, may be deemed scanty ones. They are intentionally no more, in order that any one may verify them by his own observation.

Now, from the three more important senses, we derive impressions differing not only in their nature, but in their effects.

From the peculiar objects of touch, we derive

chiefly ideas; from those of sight, chiefly emotions; and from those of hearing, chiefly desires or aversions.

In illustration of this, as of all simple truths, there exist many popular notions, as of the peculiar accuracy of touch, the superficial pleasure derived from colours, and the deeper affections from music.

An idea being the mental image of an external object, &c., — emotion being pleasure or pain superadded to this idea, — and desire or aversion implying a deeper interest superadded to this emotion, — a little reflection will show in what way these are generated by the senses to which I have ascribed them.

The accuracy of touch seems to be proportioned to its limitation, and hence it can create in the mind chiefly ideas, or give us, directly at least, only notions of the thing's existence and of its parts.

The vagueness of sight is compensated by its extension. The state of the atmosphere constituting light, though it show only the superficies of each body, displays the relations of many, both to

each other and to the observer, and these relations being necessarily either agreeable or disagreeable, add pleasure or pain to the idea which they involve, or constitute an emotion.

The atmospheric motions which constitute sound are the reports, as it were, not merely of the relations of bodies to each other, but of their actions upon each other, and upon the organs of the hearer. Instead of being the passive subjects of his sense, like forms in touch, he is the subject of their action, and, as this action affects him either pleasureably or painfully, it creates desire or aversion.

The nerves of touch in general appear to pass toward the anterior part of the brain ; the nerves of sight, toward the middle part of the brain ; the nerves of hearing, toward the posterior part of the brain ; and the nerves of motion descend from the cerebel.

Hence, the functions of these parts would be indicated, if we had no other guide.

The nose and mouth are as evidently connected with animal purposes, as the eye and ear with intellectual ones ; and a little consideration

will show that they are calculated for the excitement of emotion and passion of that inferior order.

As to the nose, it will, as soon as suggested, be evident, that, in regard to alimentary substances, it can procure only the preliminary pleasure or pain, and not the final gratification of desire. It is the organ, therefore, of animal emotion, as the eye is of intellectual emotion ; and it is remarkable that its nerves, like those of the eyes pass toward the middle part of the brain.

As to the mouth, it will also, as soon as suggested, be evident, that, in regard to alimentary substances, it does procure the final gratifications of desire. It is the organ, therefore, of animal passion or propensity, as the ear is of intellectual passion ; and it is likewise remarkable, that its nerves, like those of the ear, pass toward the posterior part of the brain.

Thus, the eye and nose are associated in emotions, though these emotions are of different kinds ; nor do they agree only in this general approximation of purpose and passage of their nerves, the seat of smell internally is placed precisely between

the two seats of vision, and externally the lachrymal ducts, maintaining the connexion, pass from the inner angles of the eyes into the nose.

Thus, too, the ear and mouth are associated in passions, though those passions are of different kinds; nor do they likewise agree only in this general approximation of purpose and passage of their nerves, the seat of taste internally is placed within the curvature of the under jaw, at the two extremities of which, and external to taste, as sight is to smell, are the two seats of hearing, the jaw ending where the ear begins, while at the same time the eustachian tubes, maintaining the connexion, pass from the ears toward the mouth.

But while the two intellectual organs, the eye and the ear, which resemble in being double, also hold a considerable distance from each other, the two animal organs, the nose and the mouth, which resemble in being single, also approximate to each other gradually, opening internally into the same cavity, and terminating externally near each other upon the face.

Nor is this all: so necessary is the approxima-

tion and accompaniment of smell and taste to animal purposes, that though the nose, the organ of animal emotion, may be said to originate between the eyes, the organs of intellectual emotion, and the tongue, the organ of animal passion, is internally connected with the ears, the organs of intellectual passion, yet do they, as it were, not only leave these connexions, but, in the lower animals, gradually approximating, accompany each other even to the end of their snout or muzzle, where the distance between them is almost lost.

Hence it is evident, that the more perfectly animal purposes are accomplished, the more approach the nose and the mouth. This nearness, therefore, indicates the closeness of animal gratification to preceding emotion, and always gives the notion of such indulgence ; while their remoteness indicates abstinence, and gives the notion of sobriety. Even the monkey, with the long space between the nose and mouth, is remarkable for the reserves which he accumulates in his cheek pouches.

Having thus established the mental conditions

to which these several organs are subservient, I may proceed to point out the indications which their forms and capacities afford.

So far as the mouth and nose are organs of sense or of impression, and not of expression, and as such are connected with the brain by peculiar nerves, it is obvious that they are not intellectual, but exclusively animal.

The primary purposes of the mouth and nose being animal, it is also obvious that their primary expressions are equally so ; but as in this case the nerves which actuate them appear to be the common nerves of motion, and as there is a great tendency to sympathy in the expressions of organs — even the fingers expanding with the eyes in wonder, it is further obvious that the same actions which express animal passion and emotion will accompany, and therefore express, intellectual passion and emotion.

On the other hand, so far as the eye and ear are organs of sense or of impression, and not of expression, and as such are connected with the brain

by peculiar nerves, it is obvious that they are not animal, but exclusively intellectual.

The primary purposes of the eye and ear being also intellectual, it is likewise obvious that their primary expressions are equally so ; but as in this case the nerves which actuate them (the eye alone admitting of much of this) appear to be the common nerves of motion, and as there every where exists this tendency to sympathy in organs, it is likewise obvious that the same actions which express intellectual emotion and passion will accompany, and therefore express, animal emotion and passion.

And in all these expressions, the evident subject of emotion or passion will render clear the animality or intellectuality of its character.

Thus, so far as the animal organs of sense are purely organs of sense, their indications are exclusively animal ; and so far as the intellectual organs of sense are purely organs of sense, their indications are exclusively intellectual ; but so far as both these kinds of organs are organs of expression, their indications are, in the animal or-

gans, primarily animal and secondarily or sympathetically intellectual, and, in the intellectual organs, primarily intellectual and secondarily or sympathetically animal.

SECTION VI.—*Physiognomical Expressions of each Organ of Sense and the Parts connected with it.*

Having thus generally considered the physiognomical power of these organs, I may now examine each distinctly, and explain its particular indications.

1. TOUCH.

On the sense of touch, it is not necessary to dwell. A finer organization of skin, especially where it covers the tips of the fingers, always indicates a finer sense of touch and corresponding sensibility of character; and vice versa.

The organ of touch is diffused over the body, but may be said to exist chiefly at the tips of the fingers. In the face, however, it may be said to

be represented chiefly by the lips. Their primary use is to touch the morsel, which is then comminuted by the teeth, before it can be tasted by the tongue. In inferior animals, the mouth, accordingly, takes the place of hands, and is the sole organ of touch; and even in man, when the hands are wanting, the lips are used for that purpose.

The lips may, therefore, be said at all times to represent the organ of touch, and to indicate its extent, accuracy, and delicacy, and consequently the ideas which are dependent upon it.

2. THE MOUTH.

The purposes of the mouth, however, are complicated; and, therefore, though the preceding is the primary use of the lips, it is not the sole one.

The tongue is the proper organ of taste; but as it is always concealed from our view by the lips, and as the lips — of all parts of the body possessing the most exquisite sense of touch, always bear an analogy in their form and delicacy to the tongue, they may be considered as also representing the organ of taste, and as indicating its extent, accu-

racy, and delicacy, and consequently the passions which are dependent upon it.

Large lips always indicate greater capacity with regard to taste and its associated desires. — Hence, in the negro, who excels in that sense, the lips are greatly developed, and the sensibility as to taste greater.



Narrow and linear lips always indicate less capacity of taste and its associated desires.



The horizontal width of the lips indicates the permanence of these functions ; their vertical extent, intensity.

Lips with coarse, irregular, and ill defined outline, always indicate a corresponding rudeness of these functions.



Lips with fine, regular, well defined outline, on the contrary, always indicate a corresponding delicacy of these functions.



Nor is even this the only indication which the mouth affords, as the following observations will show.

Both the nose and mouth have intellectual sympathies and associations — though these are second-

ary, not primary effects, and they will consequently afford corresponding indications.

All the parts connected with the lower jaw are acting parts. The under teeth act on the upper ; the tongue which is below, on the palate above ; and the under lip, upon the upper one. Now all these moving parts are under the influence of the will ; and even their tendency to act indicates desire. Accordingly, we find that the under lip is protruded in that species of passion — is its infallible accompaniment and indication.



The under lip undeveloped, on the contrary, indicates the absence of active gratification.



If this be doubted, let any one look at one face in which the under lip is thus protruded, and another in which it is not so, or at the same countenance in which it is placed in these opposite states, or, what is better still, let any one place his own under lip in these states, and let him notice the mental feeling which accompanies each of them.

As the under lip indicates passion — including both desire and aversion, it is everted or evolved in the former, and inverted, tightened or rendered linear in the latter. The former is exemplified in pleasurable gratification ; the latter, in anger.

As, in the mouth, all the inferior are acting parts, so are all the superior passive or mere receiving parts. The upper teeth, the palate and the upper lip receive the action of the corresponding lower parts. Accordingly, we find that the upper lip is expanded to receive agreeable impressions, and is the infallible accompaniment and indication of such passive enjoyment.



The upper lip undeveloped, on the contrary, indicates the absence of passive gratification.



If any one doubt this, let him also look at a face in which the upper lip is thus expanded, and another in which it is not so, or at the same countenance in which it is placed in these opposite states, or, what, as already said, is better still, let him place his own upper lip in these states, and notice the mental feeling which accompanies each.

The long upper lip is generally, if not always, without any developed portion at the mouth, and it therefore indicates the absence of passive gratification, which is perfectly consistent with the abstinent and sober character of the long space between the nose and mouth already alluded to.

When the under lip is placed over the developed

portion of the upper, it substitutes active determination for passive impression. Whoever thus places the under over the upper lip, will instantly experience the passion ; and nothing can better establish the truth of our indications.



For all the reasons already assigned,— it will be evident that when both lips are considerably developed, a character both actively and passively voluptuous exists.



On the contrary, it is evident, that when both

lips are slightly developed, a character proportionally opposed to the preceding exists.

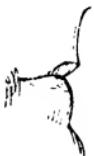


The sensual character is most strongly expressed where, not merely the coloured portion, but the whole of the lips, to their attachments beyond the gums, protrude or hang forward.



Where, on the contrary, the lips are gently held in or drawn backward or toward the angles, whatever may be their expression of passion, it is under

controul, and a character of coolness and precision is proportionally given.



This is particularly marked by a depression extending downward and outward from each angle of the mouth, till it is lost on each side of the chin, or rather diffused under the coloured part of the lip, and by a corresponding elevation over the depression at the angle.

The furrows or dimples under the under lip interchange in state or condition with those which descend from the angles of the mouth, being increased when they are diminished, and vice versa. They afford, therefore, similar indications ; but they are too trifling to require much attention.

The furrows which descend from the wings of the nose, passing also somewhat outward, are en-

creased when pleasureable sensation everts the upper lip, or laughter extends it. They, therefore, indicate capacity for such sensation.

The vertical furrow on the upper lip, extending from the middle of that lip to the nose, appears generally to bear, in its depth, a relation to the developement of the lip. Its sides appear to be somewhat elastic, and it interchanges in state or condition with the furrows which descend from the wings of the nose and pass outward. It affords, therefore, similar indications.

As desire or aversion become taste when they are delicate, and are applied to material objects, it is natural that the developed but delicately outlined lip, combined with intellectual conditions, should indicate taste — a faculty of which the very name has been borrowed from the sympathy and association alluded to.



The truth of this will be evident to all who contrast expanded and delicately outlined, with coarse and linear, lips : They will find that, while taste may be ascribed to the former, it cannot, to the latter.

The absence of eversion of the lips, on the contrary, will be found to indicate absence of taste. The persons possessing them, will, moreover, generally be found to be of formal character, often penurious, unfeeling, &c.



3. THE NOSE.

A nose which is flat, permits a less direct, extensive, and continued application of odours, and is less calculated for their enjoyment ; because, in that case, odours pass from the nostrils rather along the floor of the internal nose, and in the current of

air for mere respiration, so as to affect rather the nerve of common sensation distributed on the inferior turbinated bones than the proper olfactory nerve distributed on the superior ones.

A nose which is very elevated or of that form called Roman, permits a more direct, extensive, and continued application of odours and is more calculated for their enjoyment ; because, in that case, odours pass more directly upward to impress the olfactory nerve on the superior turbinated bones, and are calculated to be detained in the thus enlarged cavity which immediately surrounds these.

The short or upturned nose is evidently calculated to receive rapid impressions, and of course to lead to correspondingly rapid emotions ; and it therefore indicates the rapidity with which they are sought.



The long and drooping or overhanging nose is evidently calculated slowly to receive impressions, and of course with corresponding slowness to lead to emotions ; and it therefore indicates the reserve with which they are sought.



Width of the nose indicates the permanence of its functions ; its height, their intensity.

The nose, however, as well as the mouth, has intellectual sympathies and associations — though these are secondary, not primary effects, and they will consequently afford corresponding indications.

The further observations which I have made about the lower and upper lip apply likewise to the nose. — That organ possesses little mobility ; but still it is its lower part which has any share of motion, and its upper which is destitute of it.

The lower part of the nose will, accordingly, be found to be active in the procuring of animal emotion — its wings expanding to inhale the air or the odours which it wafts; and its form and development must therefore be regarded as indicating power for procuring emotion, as the under lip indicates capability of procuring passion. — [See the following figures as indicating a greater or a less degree of such capability.]



The upper part of the nose, on the contrary, being immovable, can only give expansion for the enjoyment of such emotion ; and its form and development can only be regarded, as indicating capacity for enjoying emotion, as the upper lip indicates capability for enjoying passion.

Consistently with the mere physical capability

of the short or upturned nose to receive rapid impressions, and to lead to rapid emotions, persons with such a nose, are generally quick and pert. The same is remarkable among quadrupeds: the pug dog, for instance, has such a form of nose, and precisely such habits.—This form of nose is sometimes unseemly, from its exposing those cavities of the organ, which modesty would conceal; and persons possessing this in excess are often not merely pert, but impudent, indelicate, or filthy.



Consistently with the mere physical capability of the long and drooping nose slowly to receive impressions and lead to emotions, persons with

such noses, are generally more reserved in character.



As indulged emotion becomes sentiment when delicate, and is applied to immaterial objects, it is natural that the elevation of the nose and the delicacy of its form, combined with intellectual conditions, should indicate, not mere animal emotion, but intellectual sentiment.



The absence of elevation and delicate outline of

the nose, on the contrary, will be found to indicate absence of sentiment.



The truth of this will be evident to all who contrast a nose which is elevated and delicately formed, with one which is flat and coarsely formed — the expanded but beautiful nose of a Rousseau, that pattern of sentiment, with the degraded organ of a northern Irishman for instance, crushed above and protruding below, the ascription of sentiment to which would be absolutely ridiculous, and which accords only with practical indulgence, or with passion.

The elevated nose, above described, will be found more frequently associated with a somewhat flattened posterior part of the head. — It would seem

that, in the indulgence of emotion and sentiment, the energy of the functions were, in this case, expended ; that therefore passion, connected with that part of the head, was less likely to be excited ; and that its organ consequently was less developed.

The flattened nose will be found more frequently associated with an extended posterior part of the head, as in the negro.— It would seem, in this case, that emotion and sentiment were slighted for the gratification of passion ; that the air was inhaled chiefly for the purpose of respiration, on which muscular motion, the means of gratifying passion, depends ; and that the posterior part of the head was consequently more developed.

The raising of the wing of the nose, in connexion with that of the lateral part of the upper lip, is evidently for the purpose of pleasurable emotion and passive gratification. That this association of these is natural, is further proved by the circumstance, that this elevation in both parts is consensual, and is effected by the same general muscle, the levator labii superioris alæque nasi. This ele-

vation, therefore, indicates such pleasurable emotion and passive gratification.



4. THE EYE.

An eye of great magnitude, indicates a capacity of receiving more powerful sensations of vision; because the power of all organs, equally healthy, is ever in proportion to their developement. — Hence it is, that the frugivorous mammalia, which climb trees, have in general the eye large; hence also it is, that animals with large eyes discern objects with less of light; and hence it likewise is, that fishes which are destined to live in an obscurer medium, have these organs of great magnitude.

A small eye, on the contrary, presents less capa-

city in this respect. — Hence, it is weak in the mole, &c.

An eye projecting greatly from the orbit most readily receives impressions from every surrounding quarter — a circumstance which presents its own explication.

The deeply seated eye has the opposite disadvantage, and is less readily impressed.

Intellectually considered, persons with protruding eyes seem ever in search of enjoyment ; and, animalily considered, they are generally the slaves of sensual indulgence.



Intellectually considered, deep-seated eyes have a death-like or cadaverous appearance, and the persons to whom they belong are generally colder

in their feelings, or have less sensibility ; and, animally considered, they are generally less under the influence of sensual passions.



An iris of dark colour seems to indicate more accurate inspection and generally firmer character ; because, by its means, all the scattered rays of light are absorbed, the iris, thus excited, diminishes the pupil, and the images of objects passing into the eye are rendered more definite and hard.— Hence, this colour of eye is perhaps best suited to the male countenance.

An iris of light blue colour indicates less accurate inspection and generally softer character ; because, by its means, some scattered rays, and in general a larger image, are permitted, and the impressions of objects are rendered more indefinite and soft. —

Hence, this colour of eye, perhaps, best suits the feminine countenance.

The eyelids resemble the mouth and nose as to active and passive character.—The under eyelid rises or falls with pleasure or pain — in laughter or grief; while the upper receives or excludes impressions.

Width of the eyes indicates the permanence of their functions; their height, intensity.

Eyelids, therefore, which are widely expanded, so as to give a round form to the eye, resembling its appearance in the cat, owl, &c. indicate intensity and keen inspection, but little sensibility; because it is evident, that the eye-lids are thus habitually opened in order to receive a fuller view of the object inspected; the impression it has already made being insufficient.



Hence, in most fishes, which are distinguished

for voracity, there is no moveable eye-lid; and hence, also, when mysterious or surprising objects are before us, the eyelids are expanded in amazement.

Eye-lids, on the contrary, which nearly close over the eye, indicate permanence and less keen perception, but greater sensibility. — Hence, when the eyes receive too strong impressions from the light of the sun, the eye-lids are more approximated; and hence, too, when a beloved object is before us, and the whole mind is filled with its image, the eye-lids also gradually close.



Hence, the permanence and accuracy of observation among the English, which adapts them for their excellence in mechanics, &c. and its quickness, sharpness, but instability, among the French,

which unfits them for similar pursuits, but adapts them for others. Hence monkeys, birds, &c. which all have the round expanded eye, are unstable in their motions. *

When the eye-brow, by its motions, adds to the depth of the eye, it indicates scrutiny and discernment ; because such motions depend upon a voluntary employment of certain muscles in order accurately to adapt the eye to the objects examined. -- Hence, the eye-brow is thus depressed where any object is closely inspected ; hence, also, the hand is raised over the eye to aid in the same purpose ; and hence persons reflecting are, by association, led thus to employ the muscles of the eye-brows in undulating or compressing them, even when no particular object is before the eye.



For the same reason, the elevated, undulated, and compressed bony and feathery projection over the

eye of the eagle, and the projection of similar form over the eye of the serpent, give a similar expression of scrutiny and discernment; and they actually do indicate it, because, like the corresponding prominence in man, they exclude unnecessary rays of light, and give a more accurate view of objects.— As the eye-brows are seen to be thus undulated and compressed in paroxysms of anger, they are supposed by the vulgar only to indicate anger; but the reason that they are then compressed is, because, in paroxysms of anger, the object which excites it is keenly inspected.

An eye-brow greatly elevated, on the contrary, indicates the absence of severe thought, &c.



5. THE EAR.

The magnitude of the ear, like that of all other organs, doubtless indicates its greater capability. It is probable, however, that its susceptibility of impression also, in some measure, depends on its general thinness, since we find that animals of very acute ear have the organ not only large, but very thin, as in the cat, hare, rat, mouse, bat, &c.

The degree of the projection of the ear, doubtless, contributes to the more ready collection of impressions; yet, as ears which project, are generally at the same time, turned forward, they more nearly resemble those of quadrupeds, and will be adapted chiefly to impressions from before, because, at the same time, they are incapable of turning, like those of quadrupeds, in any other direction.—Hence, such ears are defective, and inferior to the flattened and more beautiful form, by means of which impressions from various directions are more easily received.

An ear which is long between its upper margin and its lobe, will bear most relation to the elevation and depression, or intensity of sound.

An ear of considerable breadth, on the contrary, will bear most relation to the diffusion, breadth, or permanence of sound.

It is worthy of notice, that these forms of the ear generally accompany corresponding forms of the organ of voice ; and as such forms of the organ of voice always do produce elevated and depressed, or, on the contrary, broader tones, the ear is thus admirably adapted to receive such sounds as the voice emits.

An ear presenting numerous elevations and depressions, and finely elaborate, is always more delicate—a circumstance which presents its own explication.



An ear which is unelaborate or presents rather one general concavity, than many well defined ele-

vations and depressions, is rarely possessed of delicacy.



This is well illustrated by the difference between the ears of animals and men.

The general rule, with regard to character, which may be drawn from this conformation, is conformable with the old observation that persons thus destitute of musical ear, rarely possess sensibility of any species.

6. PARTS BELONGING TO THE ORGAN OF VOICE.

We have now chiefly to consider the mouth and nose, as well as the prominences of the cheeks and forehead, as constituting a portion of the organ of voice.

The great length and narrowness of the space

between the nose and the chin, always indicates shrillness and acuteness of voice.—Hence the negro, who has this form of mouth, has a voice extremely acute; because, by this means, the palate is elevated and the ellipsis of the jaws rendered narrow or acute.

The shortness and compressedness of this space, always indicates a voice which is correspondingly flat and compressed, arising from the opposite cause, namely, the flatness of the palate, &c.

The width of the jaws always indicates a fuller voice, when they are not, at the same time, compressed, but are moderately capacious in height.

Thus, as the elevation or depression of the voice—its variable quality, depends upon a variable motion of the glottis or flute part of the throat, so the fulness, or the poorness, or the flatness of the voice—its invariable quality, depends upon the invariable form of the ellipsis of the jaws, which we have been just describing.

Another quality of the voice is indicated by the form of the only parts of the face, which yet remain to be mentioned, namely, the prominences of

the cheeks, and those of the forehead immediately over and between the eyes.

This quality — resonance of the voice, is in proportion to the expansion of these parts ; for the first mentioned prominences contain cavities called the maxillary, and the latter, cavities called the frontal sinuses, in which this resonance actually takes place. The former give resonance to the lower, and the latter to the upper notes. *

It is in connexion with the voice and expression, that this elevation of the frontal sinuses indicates force and activity of character. It is accordingly often found in men, never in women ; and, among animals, it characterises the lion, eagle, &c.

It remains but to notice the chin and the teeth.

As voice and the attitudes of the general figure are closely associated,—as they may aid each

* Blumenbach has certainly mistaken the use of the frontal sinuses. — As to the ascription of individuality, locality, &c. to them, by Gall, as if they were cerebral organs, it is nonsense ; because, as already said, the external has no precise resemblance to the internal table which forms them : they can aid as to locality, &c. only by protecting the eye and directing vision ; and this misled him.

other, or be interchanged, in expression, — and as the under-jaw and chin form the most important instrument of voice, — they may evidently be taken as representatives of that with which they are thus associated and interchangeable in expression, — they may be regarded as an epitome of the locomotive system, and as indicating its qualities.*



* Of the teeth, Mr. Murphy says, “The often repeated indulgence of any particular passion, may give to a countenance a cast expressive of that passion ; but no action or disposition of the mind can have the least tendency to make the teeth long, or short, to regulate their order, or to render them sound and beautiful.”

The egregious error committed here is in supposing, that the passions only act on the organization, whereas the organization is an essential condition, if not the cause, of the passions. Thus, though no passions may be capable of making the teeth long or short, long or short teeth may, even if not a condition or cause of passion, be inseparably connected with, or be a concomitant effect of, certain passions or rather certain dispositions.

This in fact is the error here committed : the teeth are a

SECTION VII.—*Correspondence between some Parts
of the Face and posterior Parts of the Head.*

It is peculiarly remarkable, that the projection of the occiput on which, as I have said, depends the exercise of passion, corresponds accurately with the projection of the alveolar processes and teeth, or rather of the lips on which depend the gratification and expression of passion ; so that the prominence of the posterior part of the brain may always be predicted from the prominence of that part of the face.

This I mention merely as corroborating the view I have taken of the functions of the two parts.—

portion of the motive, not of the mental, system, and they can directly indicate the functions only of the motive system; but as all the systems of the body are connected and influence each other, broad and short teeth, which indicate stability and firmness of the motive system, may easily be associated with the same qualities in the mental system, and therefore may indicate these; and narrow and long teeth, which indicate instability and feebleness in the motive system, may also be easily associated with the same qualities in the mental system, and therefore may indicate these.

The correspondence which I have next to mention — of the cerebellum or organ of motion, with certain bony and muscular parts of the jaws which obey its most important mandates, as to food, voice, &c. is interesting, not only on account of this corroboration of previous views, but as enabling the student, by an examination of the face, accurately to predict the breadth and the length of the cerebellum, which, owing to its being in a great measure surrounded by the muscles of the neck, he could not otherwise determine.

The breadth of the cerebellum, then, corresponds to the breadth of the face over the cheek bones or the prominences of the cheeks; and the length of the cerebellum corresponds to the length of the lower jaw measured from the tip of the chin to the angle. From the cheek bones, arises the greater portion of one of the most important muscles, the masseter, which is inserted into the angle of the jaw, placing it thereby under the controul of the cerebellum, as the organ of volition; and it is remarkable that the breadth of the cerebellum, on which the permanence of its functions depends,

corresponds to the breadth of the fixed bones, and that the length of the cerebellum, on which the intensity of its functions depends, corresponds to the length of the moveable bone.

CONCLUSION.

Thus I have laid down all the great principles of physiognomy. These principles the reader may, with facility, apply critically to the drawings of Lavater, so as to shew the natural laws to which his taste directed him, and on which, in most cases, his judgment was founded, although he failed to detect, define, and enunciate them. Such application will, to some readers, facilitate the study. Those, however, who have carefully examined the preceding principles will find least difficulty and greatest advantage in at once applying them to the living figure, head, and face in particular. The diligent practice of a single week will, in this case, give surprising ease in the indication of character.

A P P E N D I X,

THE BONES AT HYTHE,

THE SCULLS OF THE ANCIENT INHABITANTS OF BRITAIN
AND OF THEIR INVADERS.

*Illustrated by Drawings.**

HISTORIANS, topographers, tourists, and travellers' guides all make mention of the extraordinary collection of sculls and other bones in the crypt of the church of Hythe, and some add that they are of gigantic size; yet no anthropologist has given any rational account of them.

Being convinced that this is important, not merely as enabling us to confirm some one of the vague accounts of their origin, but, which is of far greater importance, as throwing light on *the ancient population and configuration of the head in this country* (for this it will be found to do), I now propose to undertake this task — premising some historical statements, as to the ancient fort at Folkestone, and the battle field on which these sculls were found, which are necessary to understanding the general interest which attaches to them.

Folkestone appears to have been known to the Romans, and to have had, in its neighbourhood, a strong fort — probably one of those towers which the Romans, under Theodosius the Younger, are said to have built upon the south coast of Britain, to guard it against the depredations of the Saxons. This

* This Paper was originally sketched for one who promised to extend this enquiry. Having failed to do so, the sketch reverts to the writer.

Roman fort, we are told, was built on a hill more than a mile and a half distant from the sea shore, 'and was surrounded with a strong entrenchment.'

It is supposed, that the fort in question was situated on the summit of the eminence, called Castle-hill or Cæsar's Camp, about a mile and a half northward from the church at Folkestone, where the remains of entrenchments are still very evident.

From these, it appears, that the inner or upper part of the work was of oval shape, and the outer works nearly similar; the whole containing about two acres. On the south-east, where the hill is steep, it has a single ditch; on the east, a double one; and on the north and west, a treble one. The whole surface of the hill is now entirely covered with greensward; though, in various views, its ditches and their communications give to the top of the hill the same appearance as if a vast crown were cut out upon it.

After the departure of the Romans, this fort was taken possession of, first by the Britons, and afterwards by the Saxons, who called it Folcestane, that is, says an old historian, *populi lapis*.

In 456, near this place, or between Folkestone and Hythe, a bloody battle is said to have been fought between the Britons under Vortimer, and the Saxons retreating before him, after a conflict with them on the banks of the Darent, in the western part of this county, when, gaining a complete victory, he drove them into the isle of Thanet.

There is, indeed, some difference among writers as to the site of this battle; but, as Nennius and others say, it was fought in a field on the shore of the Gallic sea, where stood the *Lapis Tituli* which Somner and Stillingfleet read *Lapis Populi*, that is Folkestone, it seems most probable that it was in the situation we have described.

What adds strength to this conjecture, say some older writers, "are the two vast heaps of skulls and bones piled up in two vaults under the churches of Folkestone and Hythe; which, from the number of them, could not be but from some battle. They appear, by their whiteness, to have been all bleached, by lying some time on the sea shore. Several of the sculls have deep cuts in them, as if made by some heavy weapon, most likely of the Saxons. Probably those at Hythe were of the Britons, and those at Folkestone of the Saxons, who were pursued by them in that direction.—After this, the fort was made use of by several princes, to keep the distressed Britons in subjection, and King Ethelbert is reported to have rebuilt it."

I should here remark, that there now remains no collection of bones under the church at Folkestone, where, I was told, they had many years been interred.

Under the church at Hythe, however, the pile was formerly twenty-eight feet in length, and eight in height as well as in breadth; and it was, not many years ago, of nearly similar dimensions.

Several of the sculls have been observed to be marked with deep cuts; and one, which is carefully preserved, is remarkable for the number of these cuts, of which some present granulations along their sides.

The sculls are not, however, those of one race, either British or Saxon, but those of several.

In the crypt, is suspended a written statement, which does not agree with other accounts, contains some inconsistencies, and seems altogether much less probable: it is as follows:—

"Anno Domini 843 (in the reign of Ethelwolf), the Danes landed on the coast of Kent, near to the town of Hyta, and proceeded as far as Canterbury, a great part of which they burned. At length, Gustavus (then governor of Kent) raised a considerable force, with which he opposed their progress,—

GOTHIC SCI. L.

CELTIC SCI. L.

SKULLS OF THE ANCIENT INHABITANTS OF BRITAIN,
AND OF ITS INVADERS.



and, after an engagement in which the Danes were defeated, he pursued them to their shipping on the sea coast, where they made a most obstinate resistance. The Britons were, however, victorious; but the slaughter was prodigious; there being no less than 30,000 left dead. After the battle, the Britons, wearied with fatigue, and perhaps shocked with the slaughter, returned to their homes, leaving the slain on the field of battle, where, being exposed to the different changes of weather, the flesh fell from the bones, which were afterwards collected, and piled in heaps by the inhabitants, who in time removed them into a vault in one of the churches at Hyta — now called Hythe."

Some years ago, I visited Hythe, and I could not help being struck with the circumstance, that **TWO FORMS OF SCULL, VERY DISTINCT FROM EACH OTHER, PREDOMINATED**: — *one, a long narrow scull, greatly resembling the Celtic of the present day; — the other, a short broad scull, greatly resembling the Gothic.* — [See Fig. 1 & 2 of Plate XXI.]

These were mixed with others of less definite character, in general so varied as to fall under no such obvious classification, and some of them, from appearances, more questionable as to age.

It seemed especially remarkable, that none of the other forms of scull (but one to be afterwards mentioned) so completely differed from the living forms which now prevail in the neighbourhood, and that the two I have mentioned looked, among the rest, like primitive and, so far as regards the present population of Kent, extinct types, from which the others might, by intermarriages, have descended.

The scull of the English bull dog scarcely differs more from that of the Italian greyhound, than these two heads do: the rest, except the one alluded to, might almost have belonged to the present population.

THE LONG AND NARROW SCULL, I found, on an average of those examined, to be *nearly seven inches and a half in length* from glabella to occiput, and *nearly five inches and a half in breadth*, from the prominent part of one parietal bone to another.—[See Fig. 1.]

THE SHORT AND BROAD SCULL,* I found, on an average of those examined, to be *about six inches three quarters in length*, and *above six inches in breadth*.—[See Fig. 2.]

In height, from occipital hole to vertex, the long scull, measuring more than five inches, a little exceeded the broad one.

Thus, while the broad scull was three quarters of an inch shorter than the long one, it was above half an inch broader!

These, corresponding with other observations, left no doubt in my mind that THE FORMER HEAD WAS CELTIC OR ANCIENT BRITISH, and THE LATTER, GOTHIC — SAXON, OR DANISH.

I was resolved, however, to corroborate this conclusion by as many other circumstances as possible.—One soon occurred which gave me this satisfaction as to the British head.

The position of Castle-hill, or Cæsar's camp, at first sight, struck me as being, previous to the use of artillery, so well calculated for defence, that it was likely, in all ages, to have been *a British camp or castle*; * and being told, that, when the farmers dug for chalk during the winter, they sometimes found skeletons doubled up in square holes, and covered with masses of chalk, which they called “digging up a Roman,” but which seemed to me a great deal like *digging up a Briton*, I repaired to that neighbourhood.

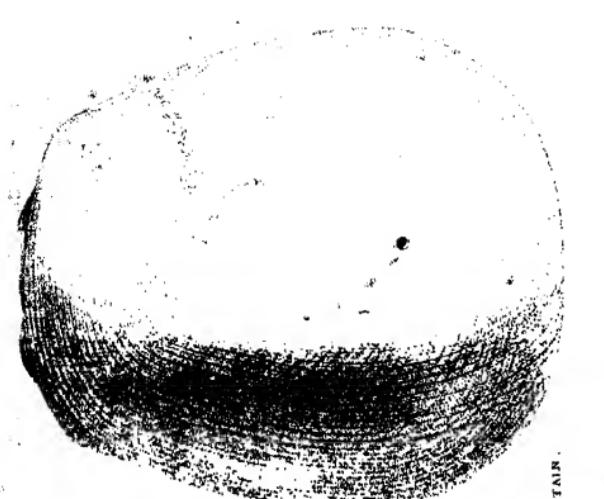
Unfortunately, the only two persons who were known to have sculls belonging to such skeletons, had removed; but,

* It would now be more easily commanded from the high ground on the north; and had the castle stood, it could only, in its purposes, have resembled that of Dover commanded from the Deal road, in being useful to the aristocracy, and utterly worthless to the nation.

ROMAN SCULL.

SKULLS OF THE ANCIENT INHABITANTS OF BRITAIN,
AND OF ITS TRADENS.

CELTIC SCULL.



returning to Hythe, I learned that there were two of these, dug from the chalk at Caesar's Camp, in the possession of one of the churchwardens, which he might probably be induced to dispose of.

I was then in the crypt examining sculls; my informant on this occasion was Mr. Chamberlain, clerk to the church at Hythe; various persons were present; and, on the sculls being sent for, *I did not hesitate to predict, that they would be found similar to the British sculls in the crypt.*

The surprise of all present was greater than mine, at finding that *the sculls, which had been dug from the chalk of the ancient camp, and which were now brought, were in no way distinguishable from the British sculls in the crypt*, but by their surfaces having been curiously corroded by the chalk in which they had been, for perhaps nearly two thousand years, imbedded.

So exactly similar indeed is one of these to the other, that the measure I have now given of the British scull accurately applies to both! — [See Fig. 1, of Plate XXII.]

A circumstance also occurred which corroborated my opinion as to the Saxon head.

Mr. Chamberlain accidentally mentioned, that, when, on one occasion he examined the pile of bones, he had found *red hair still adhering to some of the sculls*, though he could not tell on what form of head.

Seeing all the importance of this, since *red hair was a striking characteristic of the Gothic nations*, though perfectly confident it must have been found on the short and broad sculls, I immediately set to work in digging into the pile.

I had not proceeded far, when I found several *sculls with masses of red hair matted upon them*, and adhering by mere apposition, if I may use the term, to the bone.

In every instance, *these were the short and broad Gothic sculls*; and nothing of the kind could be discerned on the British!

But I have said there was here ANOTHER KIND OF SCULLS, fewer in number, but not to be confounded with the rest, and indeed not less remarkable than those I have now described.

These sculls are far more capacious than either of the preceding : the *average length of those examined being about seven inches*; their *breadth, about six, inches and a half*; and their *height, about six inches*. They are also far more solid, heavy, and strong, than either of the preceding kinds.

Notwithstanding this capacity and strength, however, they are *universally in a more imperfect state* — all the upper jaws, cheek bones, &c. being gone — circumstances which indicate that they have been *much longer subject to accidents, and are therefore more ancient*. — [See Fig. 2, of Plate XXII.]

THESE LAST ARE EVIDENTLY ROMAN SCULLS. They bear a close resemblance to others of that ancient race ; as to that in the Decades of Blumenbach, of which he says, it has “*Pro-tuberantia occipitalis externa latissima et ingentissima eminens*,” an external occipital protuberance very broad, and extremely prominent.

The same opinion I may mention was entertained by Dr. Spurzheim, to whom I showed specimens, and who agreed with me also as to the others described above.

Indeed, it seems as impossible to doubt of the race, as to view one of these large sculls, in comparison with one of each of the preceding, without ceasing to be surprised, that the Roman was easily the conqueror, and the master of the other races around him.

These last sculls had doubtless fallen in a previous age, on the same battle field ; for its vicinity was the landing place of all the robbers of those times.

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THE NERVOUS SYSTEM

TO WHICH IS PREFIXED SOME ACCOUNT OF THE

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